

A METHOD AND AGENTS FOR IMPROVING PLANT PRODUCTIVITY  
INVOLVING ENDOPHYTIC ACTINOMYCETES AND METABOLITES THEREOF  
Christopher Milton Mathew Franco et al.

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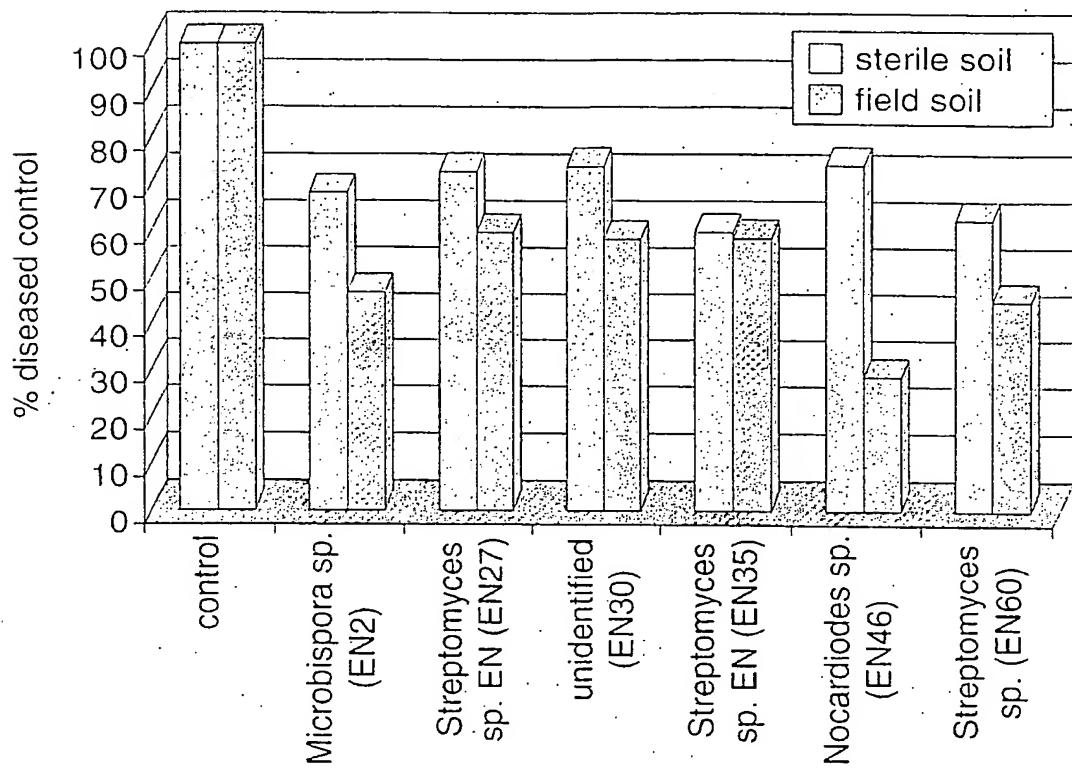


Figure 1

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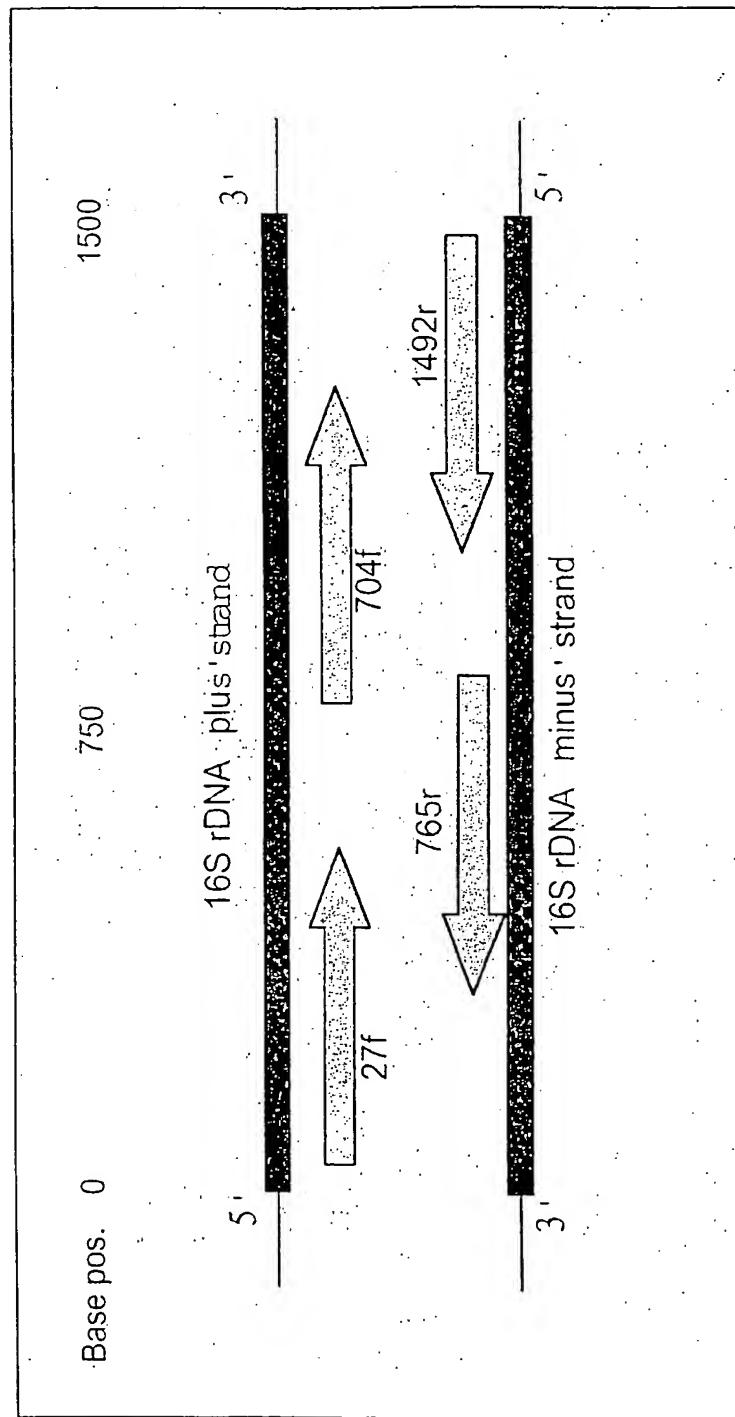


Figure 2

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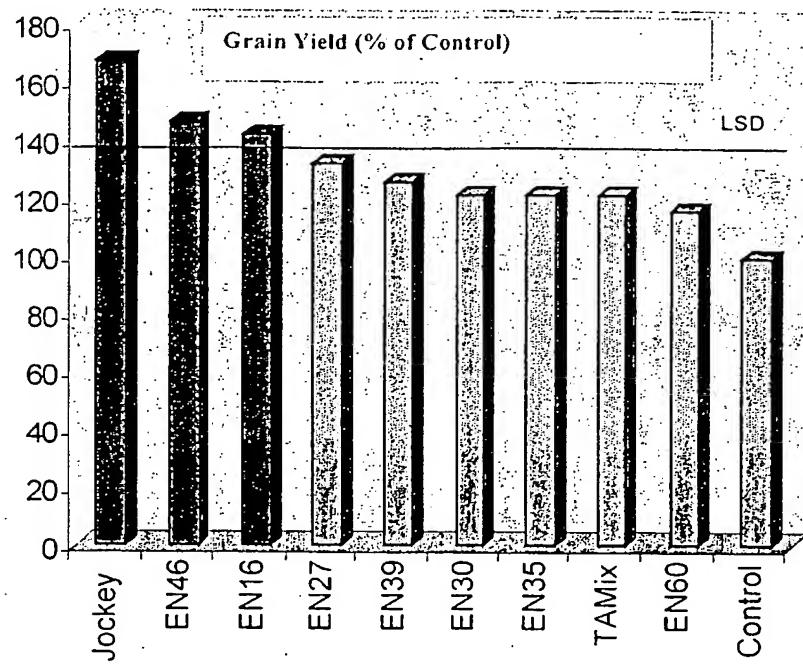


Figure 3

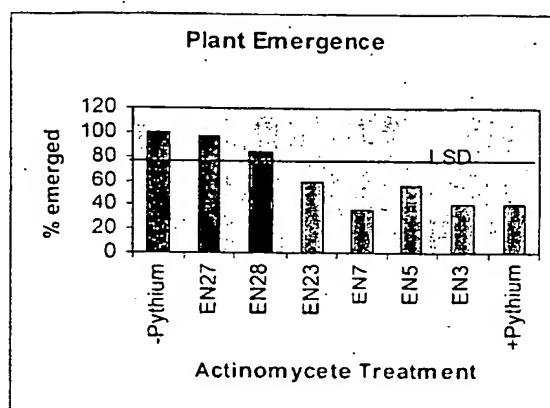
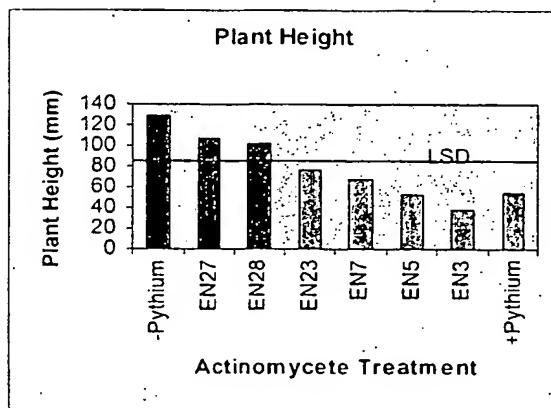
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**Figure 4**

**Figure 5**

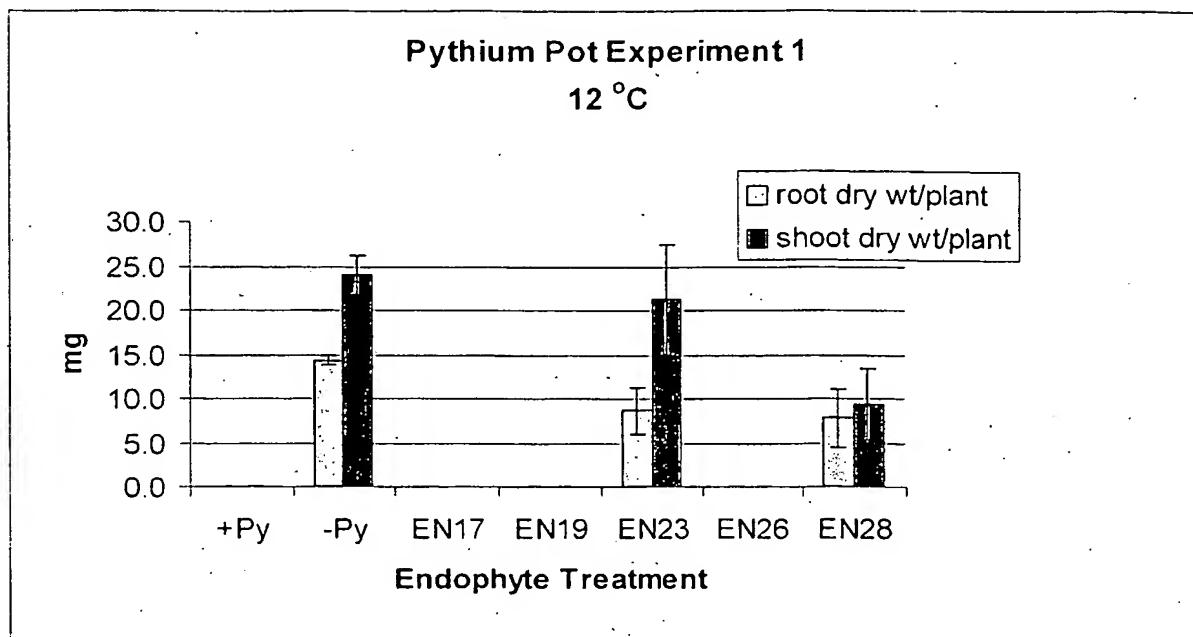
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**Figure 6**

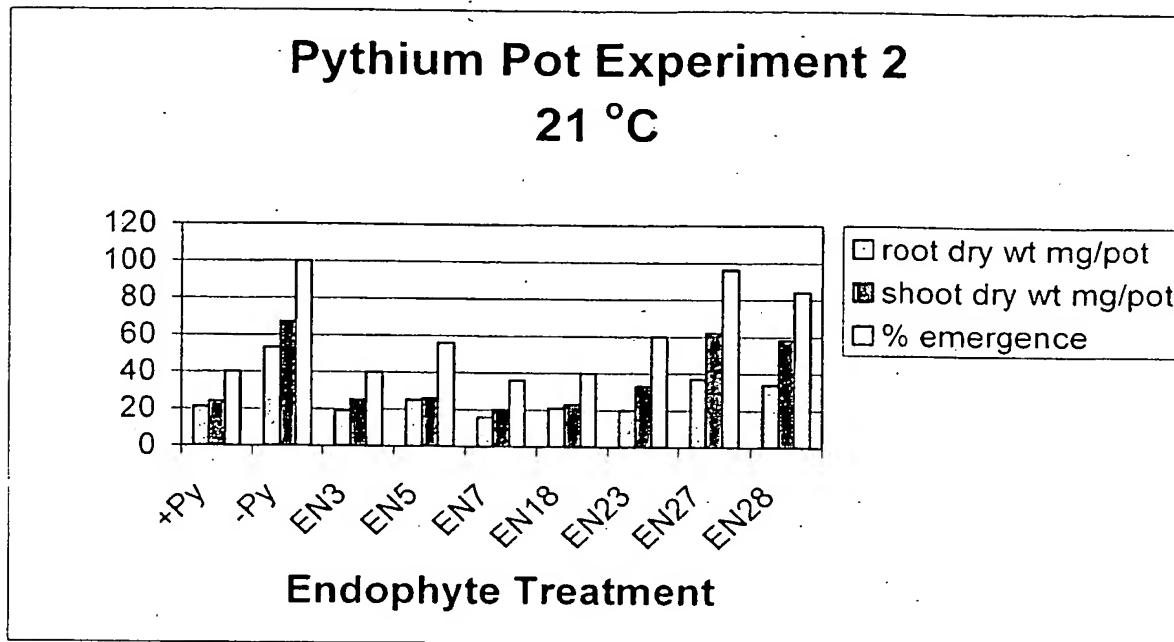
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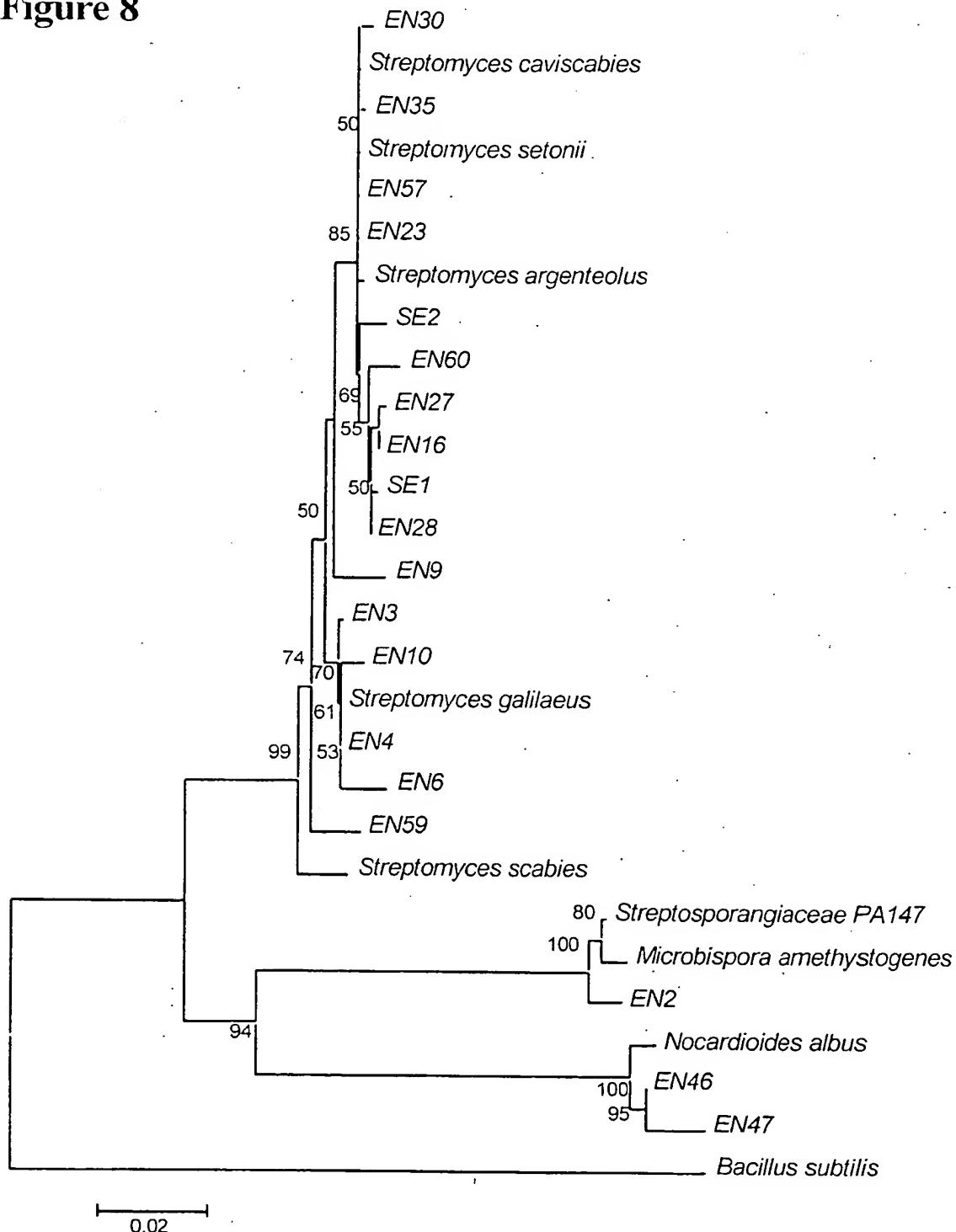
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**Figure 7**

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Figure 8



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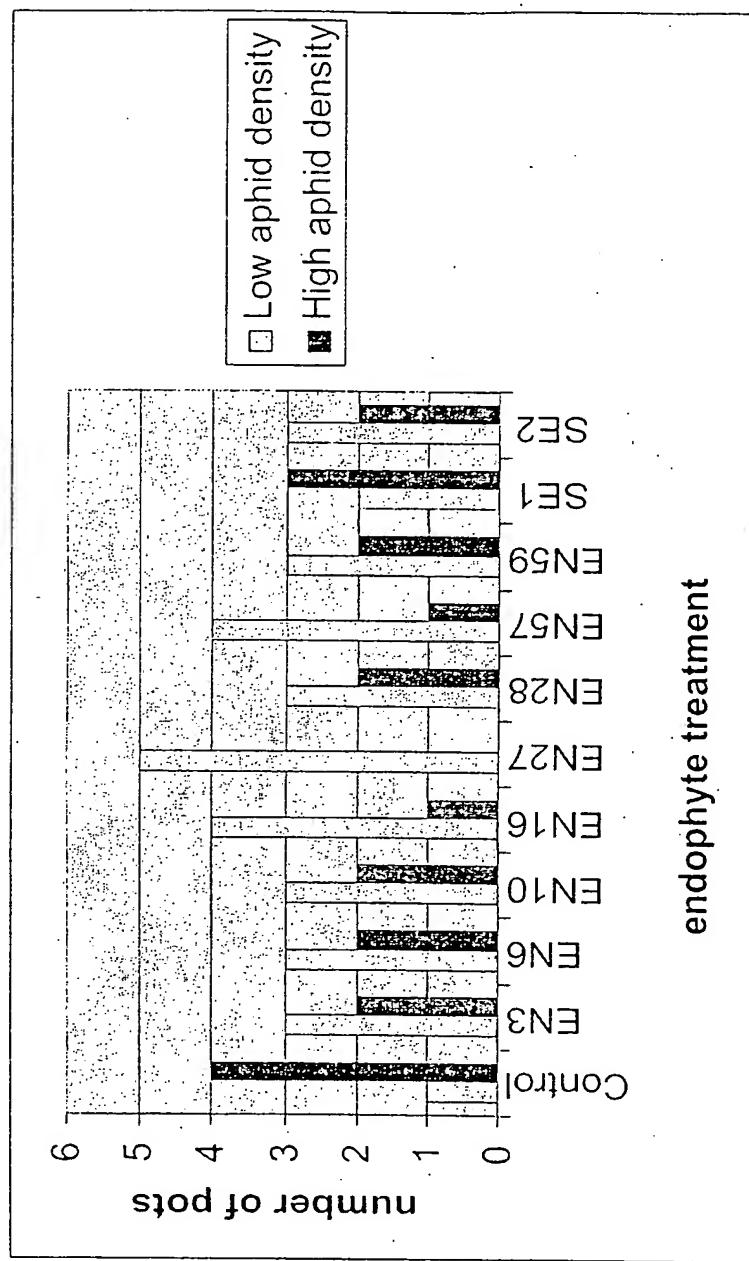


Figure 9

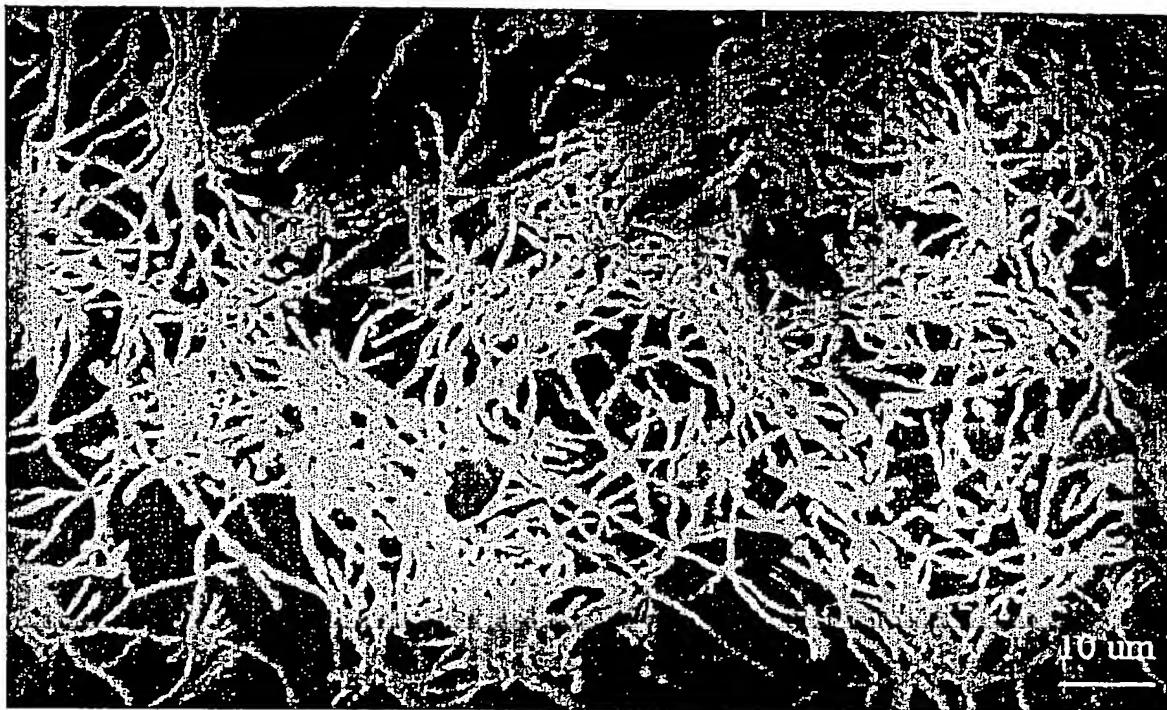
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**Figure 10**

A METHOD AND AGENTS FOR IMPROVING PLANT PRODUCTIVITY  
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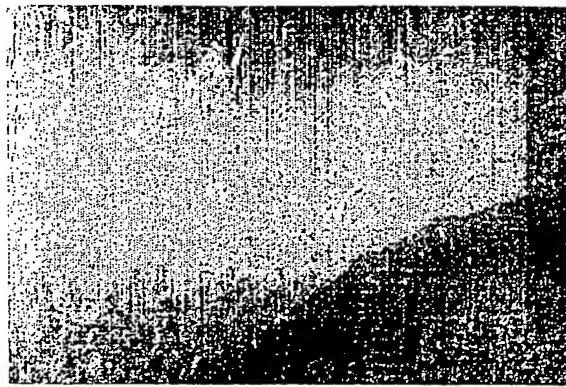
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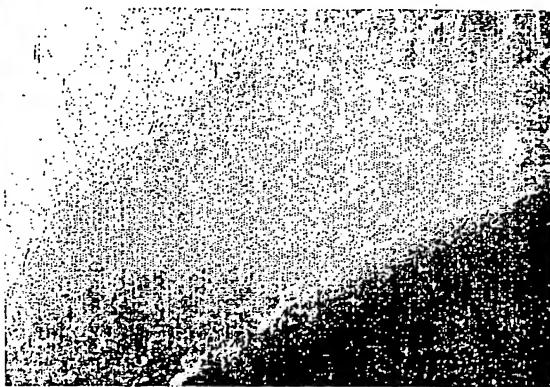
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11.1 Blue excitation/ green emission



11.2 UV excitation/ blue emission



11.3 Image enhanced merge



Figure 11

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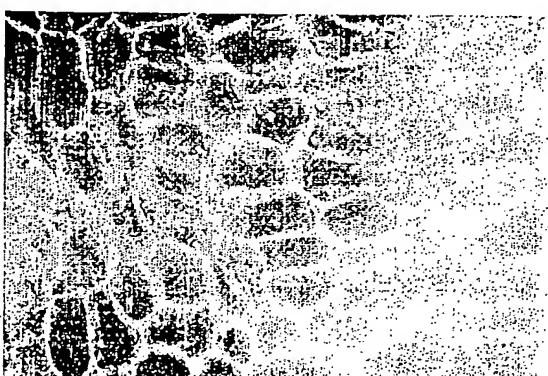
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12.1 Blue excitation/ green emission



12.2 UV excitation/ blue emission



12.3 Image enhanced merge



Figure 12

A METHOD AND AGENTS FOR IMPROVING PLANT PRODUCTIVITY  
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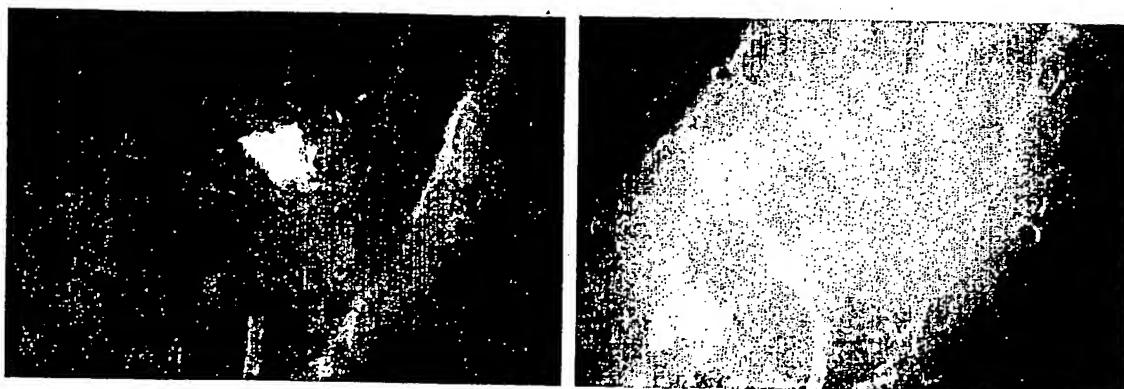
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13.1 Blue excitation/ green emission    13.2 UV excitation/ blue emission



13.3 Image enhanced merge

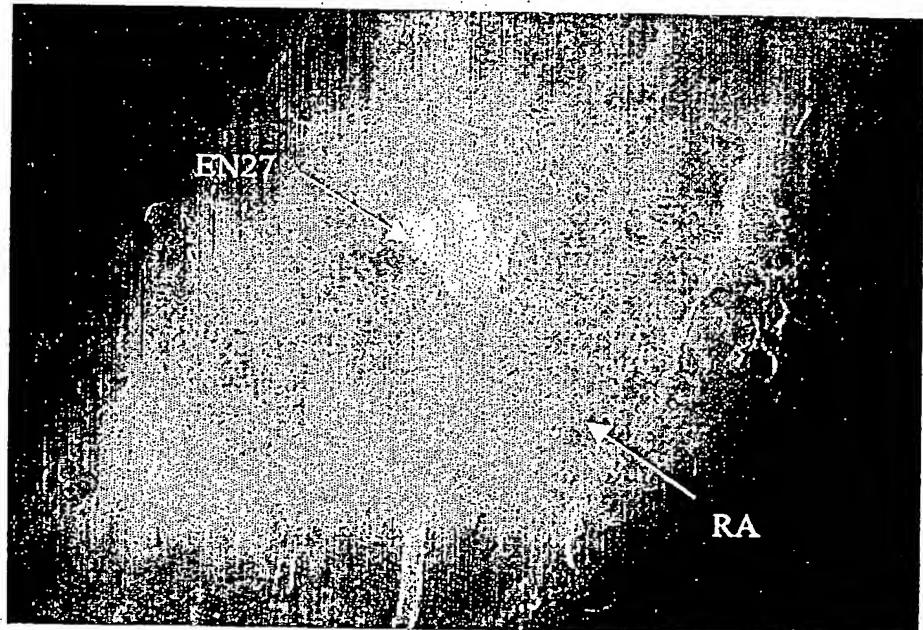


Figure 13

A METHOD AND AGENTS FOR IMPROVING PLANT PRODUCTIVITY  
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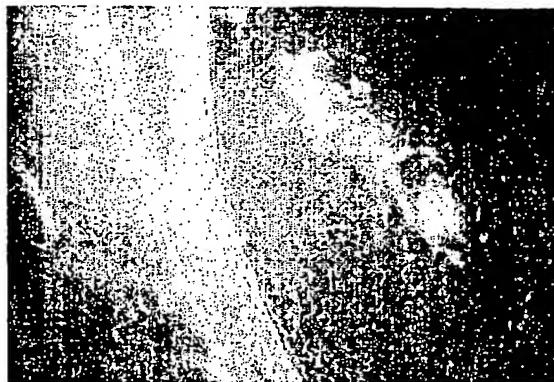
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14.1 Blue excitation/ green emission      14.2 UV excitation/ blue emission



14.3 Image enhanced merge

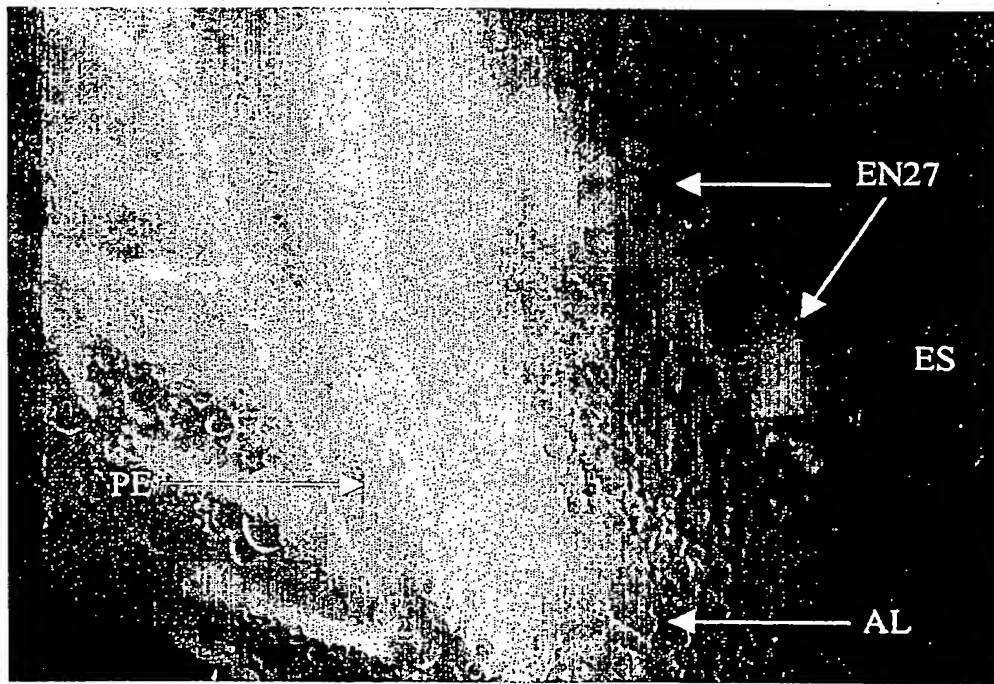


Figure 14

A METHOD AND AGENTS FOR IMPROVING PLANT PRODUCTIVITY  
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**FIGURE 15**

EN2

SEQ ID NO:1

CTTAACACATGCAANTCAAGCGAAAGGCCCTCGGGTACTCAANGGNAACGGGTGATTAAACACNTGANTAA  
CCTGCCCTGACTCTGGATAAANCCTGGAAACTGGGTCTAATACCGGATAAACCATTCNCATGGATGGT  
GGTGGAAANTTTNCGGTGGGATGGCTCGCCCTATCACCTTGTGGTGGGATGGCTACCAAGGCg  
ACgAACGGTAgCCCCCTGAgAGGGCgACC GGCCaCaCTGGACTGAgACaCCGCCgAACTCCTaCgGGAGGCA  
gCACTgGGAAATATTGCCATGGCGGAAGCCTGACGCAGNGACGCCGCGTGGGGATGACGGCCTNNGGTTGT  
AAACCTNTTTCAGCAGGGACGAAGTTGACGTGACCTGTAGAAGAAGCAGCCGGCTAAATANGTGCCAGGCC  
GGTAATANGTAGGGCGCAGCGTTNTCCGAATTATTGGGCTAAAGAGTTGTAGGTGGCTTGTGCGTTTGCC  
GTGAAAAGCCCCTGGCTTAANTACGGGTTTGCCTGGATACGGGCAGGCTAGAGGCTGGTAGGGCAAGCGGAATT  
CCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCCTGCTGGCCAqTTCTGA  
CGGTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAGATACCCCTGGTAGTCCACGCTGTAACGTTGGCGCTA  
GGTGTGGGGTCTTCACGATCTGTGCCGTAGCTAACGCTTAAGGCCCGCCTGGGAGTACGGCGCAAG  
GCTAAAACCTCAAAGGAATTGACGGGGCCCGACAAGCGGGAGCATGTTGCTTAATTGACGCAACCGCAAGA  
ACCTTACCAAGGTTGACATAACCGGAAACACTCANANATGGGTGCCTCCTTGGACTGGTGTACAGGTGGTGC  
ATGGCTGTCNNCACCTCGTCGTNAGATGTNGGTTAAGTCCCAGANCAGCAACCCCTGGTCCATGTTG  
CCAGCACNCCCTTGNNGTGGTGGGACNCATGGANAATGCCGGGTCNACTCNGAGGAAGGTGGGATGACG  
TCAAGTNATCNTGCCCTTATGTTCTGNNGT

EN3

SEQ ID NO:2

GCTGGCGCGTGTAAACACATGCAAGTCGAACGATGAACCACTTCGGTGGGATTAGTGGCAACGGGTGAGTA  
ACACGTGGCAATCTGCCCTTCACTCTGGACAAGCCCTGGAAACGGGGCTAATACCGATAACACTNCTGCTC  
TCATGGCAGGGTAAAGCTCCGGCGGTGAAGGATGAGCCCGCCCTATCAGCTTGTGGTAGGTAATGGC  
TCACCAAGGCACGACGGTAGCCGCCCTGAGAGGGCAGCGGACACTGGACTGAGACACGGCCAGACTCC  
TACGGGAGGCAGCAGTGGGAATTGCaCAATGGCGAAAGCCTGATGCGAGCGACGCCGCGTGAAGGATGACG  
GCCTCGGGTTGTAACCTCTTCAGCAGGGAAAGCGAAAGTGA CGTACCTGCGAGAAGAAGCGCCGGCTAAC  
TACGTGCCAGCAGCCGGTAAACGTAAGGGCGAACAGCCTGGTAGGAGGCTAAAGAGCTtGTAgGC  
GGCTGTACGTCGGGTGTGAAAGCCGGGCTTAACCCGGGTCTGCATTGACGGCTAgCTAgAGTGTGG  
TAGGGGAGATCGGAATTCCCTGGTGTAGCGGTGAATGCGAGATATCAGGAGGAACACCGGTGGCGAAGGC  
GcTGGGCCATTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAGATACCCCTGGTAGTCCACGCC  
GTAAACGGTGGGAACTAGGTGTTGGCGACATTCCACGTCGCGTGGCGAGCTAACGCTTAAGTCCCCGCC  
GGGAGTACGGCCGCAAGGCTAAACTCAAAGGAATTGACGGGGCCCGACAAGCAGCGGAGCATGGCTAA  
TTGACGCAACCGAAGAACCTTACCAAGGCTTGACATAACCGGAAAGCATTGAGAGATGGTCCCCCTTGTGG  
TtCGGTGTACAGGTGGTGCATGGCTGTCGTGAGCTCGTGTGAGATGGGGTTAAGTCCCGAACGGAGCGCA  
ACCCCTTGTGTGTTGCCAGCATGCCCTCGGGTGTGGGACTCACAGGAGACCGCCGGGTCACCTGGAG  
GAAGGTGGGAGCGACGTCAAGTCATCATGCCCTTATGTTGCTGGCTGCACACGTGCTAACATGGcCGGTACAA  
GAGCTGCGATACCGTGAGGTGGAGCGAACTCAAAAAGCCGGTCTCAGTTGGATGGGGACTCACAGGAGACCG  
CATGAAGTCGGAGTTGcTAATAATCgCANATCAGATTGCTGCGGTGAATACGTTcCCGGGCTTGTACAcACCG  
CCcGTACGTcACGAAAGTCGgTAAcACCcGAAGCGGTGGCAACCCCTGTTGGAGGGAGCTGTCGAAGGTGG  
GACTGGCGATTG

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[FIGURE 15 CONTINUED]

EN16

SEQ ID NO: 7

GCTTNTTGGTGGGNATGGCCTACCAAGGNGAGGACGGNTANCCNGCTGNGAGGGAGACCGNCCACACTGGGA  
ATGNGANACGGCCCAGAATCCTACGGGAGGCAGCANNNGGAANATTGACAACANGGGCAAAGCCTGATGCAGNG  
ANGCCGCGTGAGGGAAAGACGCCCTTGGGTGTAACCTNTTNAGCAGGGAAAGCAGAAAGTGAACGGTACCTG  
CAGAAGAACGCCGGTAANTANGTGCACAGCAGCCGCGTAATANGTAGGGCGCAAGCGTTGTCGGATTATTG  
GGCGTAAAGAGCTTGTAGGCCGTTGTCANGTNGGATGTGAAAGCCCGGGCTTAACCCCCGGTTGCATTGAT  
ACGGGCTAGCTAGAGTGTGGTAGGGGAGATNGGAATTCTCTGGGTGAGCGGTGAAATGCGAGATATCAGGAGGAA  
CACCGGTTGGCGAAGGCGGATCTCTGGGCATTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAG  
ATACCCCTGGTAGTCCACGCCGTAACCGTTGGCAACTAGGTGTTGGCGACATTCCACGTCGTCGGTGCCGAGCTA  
ACGCATTAAGTCCCCGCTGGGACTACGCCGCAAGGCTAAAACCTCAAAGGAATTGACGGGGCCCGACAAG  
CAGCGGAGCATGTGGCTTAATTGACGCAACCGAAGAACCTTACCAAGGCTTGACATATAACGGAAAGCATTGAG  
AGATGGTGCCTTGTGGTGGTACAGGTGGTGCATGGCTGTCGCTAGCTGTCGAGATGGTGGTT  
AACTCCCGAACGAGCGAACCCCTGTTCTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGAGAC  
TGGGGTCTGNAACTGACCCCATGAANTCGGAGTTGCTAATAATCCAAATTCANCATTGGTGCGGTGAATACT  
TCCCGGGCTGGTACACNACGCCGTCACCGAAAGTCGGTNAAACCGAACCGTGGCCAACCCCTTG  
TGGGAAGGAACGGCCNAAGTGGACTGGCGATTGGGAC

EN23

SEQ ID NO: 10

ACGAACGCTGGCGCGTGCTTAACACATGCAAGTCGAACGATGAAAGCCGTTCGGTGGATTAGTGGCGAACG  
GGTAGTAACACGTGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGAAACGGGTCTAATACGGATAACAC  
TCTGTCGCATGGACGGGTTGAAAGCTCCGGCGTGAGGGATGAGCCCGGCCATCAGCTTGTGGGG  
GTAATGGCCTACCAAGGCAGCAGCGGGTAGCCGGCTGAGAGGGCAGCCGCCACACTGGACTGAGACACGGCC  
CAGACTCCTACGGGAGGCAGCAGTGGGAATATTGACAAATGGCGAAAGCCTGATGCAAGCAGCCGGTGG  
GATGACGGCTTGGGTTGTAACCTCTTCAGCAGGGAAAGAACGAAAGTGAACGGTACCTGAGAAGAACGCC  
GGCTAACTACGTGCCAGCAGCCGGTAATACGTAGGGCGCAAGCGTTCCGGAATTATTGGCGTAAGAGCT  
CGTAGGGCGCTTGTACGTCGGATGTGAAAGCCGGGCTTAACCCGGGCTGCAATTGCAACGGCTAGCTAG  
AGTGTGGTAGGGAGATCGGAATTCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGACACGGGTGGCGAA  
GGCGATCTGGCCATTACTGACgTCTGAGGAGCGAAACCGTGGgAgCGAACAGGATTAGATAACCTGgTAG  
TCCACGCCGTAAACGTTGGgAACTAGgTGTGCGACATTCCACGTCGTCGGCGAGCTAACGCATTAAGTT  
CCCCGCCCTGGGAGTACGCCGCAAGGCTAAACCTAAAGGAATTGACGGGGCCCGCACAGCAGCGGAGCATG  
TGGCTTAATTGACGCAACCGAAGAACCTTACCAAGGCTTGACATATAACGGAAAGCATTGAGATGGTGGCC  
CCTTGTGGTGGTATAACAGGTGGTGCATGGCTGTCGTGAGCTGTCGAGATGGGGTTAAAGTCCCAC  
GAGCGCAACCCCTGTTCTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGAGACTGCCGGGCTCAA  
CTCGGAGGAAGGTGGGACGACGTCAGTCAAGTCATCATGCCCCTATGTCTGGCTGCACACGTCATAACATGGCC  
GTACAATGAGCTGCGATGCCGAGGGCGAGCGAATCTCAAAAGCCGGTCTCAGTTGGATTGGGTCTGCAAC  
TCGACCCCATGAAGTCGGAGTTGCTAGTAATGCCAGATCAGCATTGCTGCCGTGAATACTGTCGGTCCCGGGCTTGT  
CACACCGCCCGTCACGTACGAAAGTCGGTAACACCGAACGCCGGTGGCCAACCCCTGTGGGAGGGAGCTGTC  
AAGGTGGACTGGCGATTG

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[FIGURE 15 CONTINUED]

EN27

SEQ ID NO:12

TAAANACATGCAANTCGAACGATGAACCCNGTTTGGTGGATTAGTGGCAGACGGTGAGTAANANGTGGGCA  
ATTTGCCCTTCATTTGGACAAGCCCTGGAAACGGGTTAATACCGGATAACATTTNTCCGCATGGGANGGGG  
TTGAAAGNTCCGGCGGTGAAGGATGAGCCCGCCCTATNAGCTTGGTGGGTAATGGCTACCCAGGGAG  
ACGGGTAGCCGGCTGAGAGGGCGACCGGCCACACTGGGAATGAGANACGGCCAGAATCTACGGGAGGCAGCA  
GTGGGGAAATTGACAATGGCGAAAGCCTGATGCAGCGANGCCCGTGGAGGGATGACGGCTTNGGGTTGAA  
ACCTTTTNAKGAGGGAAAGAAGCGAAAGTGAACGGTACCTGCAGAAGAAGCGCCGGCTAAATAAGTGCACAGCC  
GCGGTAATAAGTAGGGCGAACCGTGTCCGGAATTATTGGCGTAAAGAGCTTGTAGGCGCTTGTCAANGTNGG  
ATGTGAAAGCCCAGGGNTTAACCCCGGGTTGCATTGATACGGCTAGNTAGAGTGTGGTAGGGAGATNGGAA  
TTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGGGATCTCTGGCCATTACT  
GACGCTGAGGAGCGAAAGCGTGGGGAGCGAACAGGATTAGATACCCCTGGTAGTCCACGCCGAAACGTTGGGAAAC  
TAGGTGTGGCGACATTCCACCGTCGTGGTGGCGAGCTAACGCTTAAGTCCCCGNCTGGGAGTACGGCCGC  
AAGGCTAANACTCAAAGGAATTGACGGGGGCCGNACAAGCAGCGGANCATGTGGCTTAATTGACGCANCAGCGA  
AGAACCTTACCAAGGCTTGACATATACCGGAAGCATCAGAGATGGTCCCCCCTTGTGGTCGNTATACANGTGG  
TGCATGNCTGTCGTACCTCGTGTGAGATGTGGGTTAAGTCCCGAACGAGCGCNACCTTGNTCTGTGTT  
GNANCATGCCCTCGGGGNTGATGGGACTCACAGGANACTGNCCGGGGTCAACTCCGGANGAAGGTGGGTGAC  
GAAGTCAAGGTACATCGNCCCCTTATGTCTGGTGTGACACGTGC

EN28

SEQ ID NO:13

TTCGGNGGTGGANTAGNGGCNACGGGNACCAACANNGGGCAATCCCCCTTCANTTNGACAACCCCTGGA  
AACGGGTNTAATACCGATAACANTTNTCCCGCATGGGANGGGTTGAAAGCTCCGGCGTGAAGGATGAGC  
CCGCGGCCTATCAGCTTGGTGGGTAATGGCTACCAAGGCAGACGGGTAGCCGGCTGAGAGGGCGACC  
GGCCACACTGGGANTGAGANACGGCCAGAATCTACGGGAGGCAGCAGTGGGAATATTGACAATGGGCGAAA  
GCCTGATGCAGCGACGCCCGTGGGGATGACGGCTTGGTTGAAACCTTTTCAAGCAGGGAAAGAACCGAAA  
GTGACGGTACCTGAGAAGAGCGCCGGCTAAATANGTGCAGCAGCCGGTAAATANGTAGGGCGAACCGTTG  
TCCGGAATTATTGGCGTAAAGAGNTTGTAGGCGCTTGTCAANGTGGATGTGAAAGCCCAGGGCTTAACCCGG  
GTTTGCATTGATACGGGCTAGCTAGAGTGTGGTAGGGAGATCGGAATTCTGGTGTAGGGTGAATGCGCAG  
ATATCAGGAGGAACACCGGTGGCGAAGGCAGGAGCTGAGGCGCTTGGGAGTACGAGCTGAGGAGCGAACAGCTGGGAG  
CGAACAGGAATTAGATAACCTGgTAGTCCACGCCGAAACGTTGGgAACtAGgTAGTGGcGACATTCCACGTcGT  
CGgTGCCGCAGCTAACGCTTAAGTCCCCGCTGGGAGTACGgCCCGCAAGGCTAAACTCAAAGGAATTGAC  
GGGGgCCCGCACAAGCAGCGAGCATGTGGCTTAATTGACGCAACGCGAAGAACCTTACCAAGGCTTGACATAT  
ACCGGAAAGCATCAGAGATGGTCCCCCTTGTGGTGGTATACAGGTGGTGCATGGCTGTCAGCTCGTGTGTC  
GTGAGATGTTGGGTTAAGTCCCGAACCGAGCGAACCCCTTGTGGTGGTGCATGGCTGTCAGCTCGTGTGTC  
GGGGACTCACAGGAGACTGgCCGGGTCAACTCGAGGAAGGTGGGAGCAGCTCAAGTCATCATGCCCTTATG  
TCTTGGGGCTGCACACGTGCTACAATGCCGGTACAATGAGCTGCAGGCCGGAAGCGGAATCTAAAA  
AaGCCGGTCTCAGTCGGATTGGGTCTGCAACTCGACCCCATGAAGTGGAGTTGCTAGTAATCGCAGATCAGC  
ATTGCTGGGTGAATACGTTCCCCGGGCTTGTACACACCAGCCGTCACGTCACGAAAGTCGGTAACACCCGAAGC  
CGGTGGTCCAACCCCTTGTGGAGGGAGCTGTCGAAGGTGGGACTGGCGATTGG

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[FIGURE 15 CONTINUED]

EN46

SEQ ID NO:16

ATGCAGTCGAGCGAAAGGCCCTCGGGTACTCGAGCGGAACGGTGAGTAACACGTGAGTTAATCTGCC  
CAGGCTCTGGATAACCACCGAAAACGGTATTAAATACCGAATACGACAACCGATTGCATGATCTGGTgGTGNA  
AAGTTTTCTGGCTGGATGTGCTTCGCGCTATCAGCTTGGTGAGGTAAATGGCTACCCAAGGCTCGAC  
GGTAGCCGGCTGAGAGGGTGACCGNCCACACTGGGACTGAGACACGCCAGACTCCTACGGGAGGCAGCACTG  
GGGAATATTGGACAATGGCGGAAGCCTGATCCAGCAACGCCGCGTGGGGATGACGCCCTCGGGTTGAAACC  
TCTTCAGCACAGCGAACGCGAAGTGAACGGTATGTCAGAAGAAGGACCGGCAACTACGTGCCAGCAGCCGCG  
GTAATACGTAGGGTCCGAGCGTTGTCGGAATTATTGGCGTAAAGGGCTCGTAGGGCTGTCGCTCGGGAG  
TGAACACAGGTGCTAACACCTGGCCTGTTGATACGGCAGNCTAGAGGTACNCAGGGAGAATGGAATT  
CTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAAACACCGTGGCGAAGNCGGTTCTCTGGGAGTATCTGA  
CGCTGAGGAGCGAACAGTGTGGGAGCGAACAGGATTAGATAACCTGGTAGTCCACACCGTAAACGTTGGCGCTA  
GGTGTGGACACATCCACGTGTCGCGCAGCTAACGATTAANCCCCCGCTGGGAGTACGCCGCAA  
NGCTAAAACCTCANAGGAATTGACGGGGCCCGACAAGCGCGGAGCATGCCGATTAATTGATGCAACCGAAG  
AACCTTACCTGGTTTGACATACACCAGAACGCCGACAGATACGCCCTTTAGTCgGTGtaCAGGTGGTGCA  
TGGCTGTCgtCAgCtCgCTGTCGTGAGATGTTGGGTTAAGTCCCGAACAGCGCAaCCCTCgTCCTATGTTG  
CaGCAATTGGTTGgGGACTCATAGGAAGACTGCCgGGGTcaACTCGGAGGAAGGTGGGAGTACGTCAAGTCATC  
ATGCCCTTATGTCAGGGCTCACGCATGCTAACATGGCGGTACAAAGGCTGCGATCCCCTGAGGGTGAGCG  
AATCCCCAAAAGCCGGTCTCAGTTGGATTGGGCTGCAACTCGACCCCATGAAGTCGGAGTCGCTAGTAATCG  
CAGATCAGCAACGCTGCGGTGAATACGTTCCCGGGCTTGTACACACCGCCGTCACGTACGAAAGTCGGCAAC  
ACCGAAGCCANTGCCCAACTCGTAAGAGAGGGAGCTGT

EN60

SEQ ID NO:18

ATGCAAGTNGAACGATGAANCCNTTGGGTGGATTAGTGGCGAACGGTGAGTAANANGTGGCAATTGCCCT  
TCAATTGGGACAAGCCCTGGAAACGGGGNTAATACCGATAACANTNTGCCATGGACGGGTTAAAG  
CTCCGGCGGTGAAGGATGAGCCCGCGCCTATNAGCTTGGTGGGTGATGGCTACCAAGGCAGCACGGG  
AGCCGGCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGCCAGACTCCTACGGGAGGCAGCAGTGGGG  
AATATTGACAATGGCGAAAGCCTGATGCAAGCAGCCGCGTGGGGATGACGCCCTCGGGTTGAAACCTT  
TTCAGCAGGGAAAGAAGCGAAAGTGAACGGTACCTGCAAGAAGAAGCAGCCGCTAACATGTCAGCAGCCGCGTA  
ATANGTAGGGCGAACGTTGTCGGAATTATTGGCGTAAAGAGTTGTTAGGCGCTTGTCACTGNGGATGTGA  
AAGCCCAGGGCTTAACCCGGGTTGCAATTGCAACGGCTAGCTAGAGTGTGGTAGGGAGATCGGAATTCTG  
GTGTAGCGGTGAAATGCGCAGATATCAGGAGAACACGGTGGCGAACGGGAGTACGGCCATTACTGACGNT  
GAGGAGCGAAAGCGTGGGGAGCNAAACAGNATTAGATACCCGGTAGTCAAGCCGTAACGTTGGGAACCTANGT  
TTGGCGACATTCCACGTGTCNNGCCCANCTAACGCAATTAGTTCCCGCCTGGGGAGTACGGCCGCAAGGCT  
AANACTCAAAGGAATTGANGNNGGCCGACAAGCAGCGAGCATGTGGCTTANTTCNACGCANC CGAAGAAC  
TTACCAAGGTTGCCATATACCGGAAAGCAGCAACGGAGATGTCGCCCCCTGTGGTCGGTATACAGgTGGTGCNTG  
GCTGTCGTCAGCTCGTGTGACATGTTGGTAAgTCCCGTCAACGAGGAGCATGTGGCTTANTTCNACGCANC CGAAGAAC  
CATGCCCTCGGGGTGATGGGACTCACAGGAGACTGCCGGGCTAACACTCGGAGGAAGGTGGGAGCAGCTCAAG  
TCATCATGCCCTTATGTCGGCTGCAACACGTGCTAACATGGCCGGTACAATGAGCTGCGATGCCGCGAGGCG  
GAGCGAATCTCAAAAGCCGGNTCAGTCGGATTGGGTCTGCAACTCGACCCCATGAAGTCGGAGTTGCTAGT  
AATCGCAGATCAGCATTGCTGCGGTGAATACGTTCCCGGGCTTGTACACACCGCCGTCACGTACGAAAGTCG  
GTAACACCCGAAGCCGNTGG

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[FIGURE 15 CONTINUED]

PM87

SEQ ID NO:24

GGCCCAGANATCCGNCTTCGCCACCGGTGTTCCCTCCTGAATACTGCCTACCCAGGAATTCCG  
ATCTCCCTACCAACTCTAACTAGCCCCGTATCGAATGCAGACCCGGGGTTAACGCCCCGGCTTCACATCCGAC  
GTGACAAGCCGCCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTACCGCGGCTG  
CTGGCACGTAATTAGCCGGCGCTTCTCGAGGTACCGTCACCTTCGCTTCTCCCTGCTGAAAGAGGTTACA  
ACCCGAAGGCCGTATCCCTCACGCGGCGTCGCTGCATCAGGCTTTCGCCATTGTGCAATTACCCCCACTGCTG  
NCTCCCGTANGAGTCTGGGCCGTGTCAGTCCCAGTGTGGCCGGTCGNCCCTCTCAGGCCGGCTACCGTCGTCG  
CTTGGTAGGCCATTACCCCACCAACAAGCTGATANGCCGNGGCTCATCCTTCANCSTCGGAGTTCAANCCG  
TCCATGCGGGACAGAGTGTATTACCGGTATTANACCCGNTCAGGGCTGTCCANAGTGAAGGGCAGATNGCCAC  
GTGTTATCACCGTTCGCCACTAATNACANC GAAACGGCTTATCGTNCACTGCATGTGTTAACACNCAGCGTT  
CGTCCTGAGCCAG

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**FIGURE 16**

EN5

SEQ ID NO:3

GTAATGGCCCANAACCGCCTCGCCACCGGTGTTCCCTCTGATATCTGCGCATTCACCGCTACACCAGGAAT  
TCCNATCTCCCTACACACTCTAGCTAGCCCGTATCNAATGCAAACCTCGGGGTTAAGCCCCNAGCTTCACATC  
CGACGTGACAAGCCGCCTACAANCTTTACGCCAATAATTCCGGANAACGCTCGCACCCCTACNTNTTACCGCG  
GCTGCTGGCNCCTNTTAGCCGGTGCCTCTGCAAGTACCGTCACTTCGCTTCTCCCTGCTNAAAAAGGTT  
TACAACCCCTANGGCCGT

EN6

SEQ ID NO:4

TGAGGGATGACGGCNTTCGGGTTGTAACNTTNTCACCAGGGAAGAACGAAAGTGNCGTACCTGCAGAAGA  
AGCGCCGNCTAACTACGGGCCAGCATTCCCGGTAATACGTAGGGCGCAATCGTTGTCGGAATTANTGGCGTAA  
AGAGNTCGTAGGGCGCTTACCGTCGGGTGAAAGCCGGGCTTAAGCCCCGGGCTCGCATTGATACGGG  
TAGCTAGANTNTGNTAGGGGAGATCGGAATTCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGG  
TGGCGAAGGCGGATCTcTGGCCTTACTGACGCTGAGGGCGAAAGCGTGGGAGCGAACAGGATTAGATAACCC  
TGGTAGTCCACGCCGTAACCGGTGGGAATAGGTGTTGGCAGATTCCACGTGTCGGTGCCGAGCTAACGCAT  
TAAGTTCCCCGCCTGGGAGTACGGCCGAAGGCTAAACTCAAAGGAATTGACGGGGGCCGACAAGCAGCGG  
AGCATGTGGCTTAATCGACGCAACGCCAAGAACCTTACCAAGGCTTGACATACACCGGAAGCATCAGAGATGG  
TGCCCCCCTTGTGGTGGTCAAGGTGGTGCATGGCTGCGTCAAGCTGTCGTGAGATGTTGGGTTAAGTCC  
CGCAACGAGCGCAACCCCTGGTTCTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGAGAACGCCG  
GGGTCAACTCGGAGGAAGGTGGGACGACGTCAAGTCATCATGCCCTTATGTCTGGCTGACACGTGCTACA  
ATGGCAGGTAAATGAGCTGCGATACCGTGAGGTGGAGCGAATCTCAAAAAGCCTGCTCANTCGGATTGGGTT  
CTGNAANTCGACCCCATGAAAGTCGGAGTTGCTAATTATCCAGATCAACATTGCTGGCGGTGAATACGTTCCG  
GGGCCTTGGTAAACACCGCCCGTCAANGTNAAGAAAGTCGGTAACACCGGAANCCGGTGGCCAANCCCT

EN7

SEQ ID NO:5

CCGCCTTCGCCACCGGGTGTTCCTCTGATATCTGCGCATTCACCGCTACACCAGGAAATTCCNATCTCCCTA  
CCACACTCTANCTANCCGTATCGAATGCAAACCCGGGTTAANCCCGGGCTTCACACCCGACNTGACAAGCC  
GCCTACAAACTCTTACGCCAATAATTCCGGACAACGCTGCGCCCTACNTATTACCGCGCTGCTGGCACNTA  
TTAGCCGGCGCTTCTCTGCAAGGTACCGTCACTTGCTTCCCTGCTGAAAAAGGTTACAACCCGAAGGC  
CGTCATCCCTCACCGGGCGTGCATCAGGCTTCCGCCCATTGTGCAATATTCCCCACTGCTGCCTCCCTAG  
GAATCTGGCCGTGCTCAATCCAGTGTGGCCGGTCCCTCTCNGCCGCTACCGTCNTCCCTGGTNACCATT  
ANCTCACCAACAACATGATAGGNGCGGGCTCATTTACGCGGGAACTTCAACCACC

EN9

SEQ ID NO:6

GGCGGGCGTCTAACACATGCAAGTCGAACGATGAAGCCCTCGGGGTGGATTAGTGGGAACGGGTGAGTAACA  
CGTGGGCAATCTGCCCTTCACTCTGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGATTGAGGGCAT  
CTCCTGGTaCTGGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGCcTATCAGCTTGTGGTAATGGCCTACC  
AAGGCAGCGACGGTAGCCGGCTGAGAGGGCGACCGGCCACACTGGACTGAGACACGGCCAGACTCCTACGG  
GAGGCAGCAGTGGGAATTGACAATGGCGAAAGCCTGATGCAGCGACGCCGCGTGGAGGGATGACGGCCTTC  
GGGTTGTAACCTTTCAAGCAGGGAAAGAAGCGAGAGTGCAGGTACCTGCAAGAAGAAGGCCGGCTAACTACGTG  
CCAGCAGCGCGGTAAACGTAGGGCGCAAGCGTTGTCGGAAATTATGGCGTAAAGAGCTCGTAGGGCGCTG  
TCACGTGGGTGTGAAAGCCGGGCTTAACCCGGGCTGCATCCGATACGGGCAGGCTAGAGTGTGGTAGGG  
AGATCGGAATTCCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGTGGCGAAGGGCGGATCTCTGG  
GCCATTACTGACGCTGAGGAAGCGTGGGAGCCaACAGGATTAGATAACCTGGTAGTCCACGCCGCTAAC  
GTTGGAACCTAGGTGTTGGCGACATTCCACGTGTCGGTGCCGAGCTAACGCTTAAGTCCCCGcTGGGAGT  
ACGGCCGCAAGGCTAAACTCAAAGGAATTGACGGGGGCCGACAAGCAGCGGAGCATGTGGCTTAATCGACG  
CAACCGCAAGAACCTTACCAAGGCTTGACATATACCGGAAAGCGCCAGAGAGTGGTCCCCCTGTGGTGGTAT  
ACAGGTGGTGCATGGCTGTCGTGAGCTCGTGTGAGATGTTGGTTAAGTCCCCGCAACGAGCGCAACCCCTGT

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[FIGURE 16 CONTINUED]

CCTGTGTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGAGACCGCCGGGTCAACTCGGAGGAAGGTGG  
GGACGACGTCAAGTCATCATGCCCTTATCTCTGGCTGCACACGTGCTACAATGGCCGTACAAAGAGCTGCG  
ATGCCGTGAGGCAGCAGAATCTCAAAAAGCCGGTCTCAGTCGGATTGGGTCTGCAACTCGACCCATGAAGT  
CGGAGTTGCTAGTAATCGCAGATCAGCATTGCTGCCGTGAATACGTTCCGGGCTTGTACACACCAGCCCAC  
GTCACGAAAGTCGGTAACACCCGAAGCCGGTGGCCAACCCCTCGGGAGGGAGCTGTCGAAGGTGGGAC

EN17

SEQ ID NO:8

CCGCCTCGCCACCGGTGTTCTCTGATATCTGCGCATTCAACCGCTACACCCAGGAATTCC  
NATCTCCCTACACACTCTAGCTAGCCCCTACAAATGCAAACCCGGGTTAACGCCCCGGCTTTC  
ACATCCNACGTGACAAGCCGCTACAANCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCT  
ACNTATTACCGCGGCTGCTGGCACNTATTAGCCGGCGTTCTGCAAGGTACCGTCACTTCGCT  
NCTTCCTGCTGAAANAGTTACAACCCAAAGGCNTCATCCCNCCGGNTCTGCNTCNGGC  
TTNCNCCCATTGTTCAANNTCCCCACTGCTNCTCCCTCGGAATCTGGCCGNTGTCTCATTCCCN  
TTNTGGCCGGTCCCCCTNCAGGCCNGCTACCC

EN19

SEQ ID NO:9

CTCAGCGTCNGTAATGGCCAAAAACCGCCTCGCCACCGGTGTTCTCTGATATCTGCGCATTCAACCGCTAC  
ACCAGGAATTCCNATCTCCCTACCACACTCTAGCTAGCCCCTACNAATGCAAACCCGGGTTAACCCC  
TTTCACATCCNACNTGACAAGCCGCTACAANCTTTACGCCAATAATTCCGGACAACGCTTGNCNCCCTACTT  
ATTACCGCGGCTGCTGGCACTTATTAGCCGGCGTTCTGCAAGGTACCGTCACTTCGCTTCTCCCTGCTN  
AAAAAGGTTACAACCCNAAGGCCGTACCCCTACGCCGNTCGCTGCATCAGGCTTNCNCCATTGTGCAATA  
TTCCCCACTGCTGCCTCCCGTAGGATTCTGGCCGTNTCTCATTCCANTGTGGCCGGTCGCCCTCTCAGGCCGG  
CTACCCGTNCNCCCTGGTAGGCCATTACCCCAACAAGCTNATAGGCCGGGCTCATCCTCACCGCCGG  
AAGCTTCAACCCNTCCATGCCGGANAAATTGTTNTCCGGTATTAAACCCGTTCCAGGNTTGTCCAAAAT  
TGAAGGGGGATTGNCCACTTTACTCACCGTTCNCCNCTAATCCACCAACC

EN26

SEQ ID NO:11

CCGCCTCGCCACCGGTGTTCTCTGATATCTGCGCATTCAACCGCTACACCCAGGAATTCCNATCTCCCTACC  
GAACCTCTANCCTGCCGTATCNACTGCAAACCCGGGTTAACGCCCCGGCTTACAACCGACNTGACAAGCCGC  
CTACAANCTTTACNCCCAATAATTCCGGACAACGCTTGCGCCCTACNTATTACCGCGGCTGCTGGCACNTATT  
TAGCCGGCGCTTCTGCAAGGTACCGTCACTTCGCTTCTCCCTGCTGAAAAAGGTTACAACCCGAAGGCCGG  
TCNTCCCTACGCCGCGTGCATCAGGCTTCGCCATTGTGCAATATTCCCACTGCTGCCCTCCCGTAGGA  
TTCTGGCCGTGTCANTCCANTNTGGCCGGTCCCTCTCAGGCCGGNTACCGTCGTCCCTGGTGAACCNC  
TACCTCNCCAACAANCTGATAAGGCCGGGCTCANCNTGCACGCCGGANCTT

EN35

SEQ ID NO:14

AACACATGCAAGTCGAACGATGAAGCCGTTGGTGGATTAGTGGCGAaCGGGTGA<sub>a</sub>GGTAACACGTGCCAAN  
TGTGNCOGTCACT<sub>a</sub>TGGGAC<sub>a</sub>AGA<sub>a</sub>G<sub>a</sub>C<sub>a</sub>T<sub>a</sub>GGAAACGGGGCTAATACCGGATAACACTCTGCCC<sub>a</sub>GATGGGACG  
GGGTGAAAGCTCCGGCGGTGAAGGATGAGCCCGCCCTATCAGCTTGGGGTAATGGCCTACCAAGGC  
GACGACGGGTAGCCGGCTGAGAGGGGACCGGCCACACTGGGACTGAGACACGCCAGACTCCTACGGGAGGC  
AGCAGTGGGAATATTGACAATGGGCAAAGCCTGATGCA<sub>a</sub>GGCGACGCCGCGTGA<sub>a</sub>GGGATGACGCCCTCGGGTT  
GTAAACCTCTTCAGCAGGGAAAGCAGGAAAGTGA<sub>a</sub>GGTACCTGCA<sub>a</sub>GAAGGCCGGCTAACTACGTGCCAGC  
AGCCGCCGTAATACGTAGGGCGAAGCGTTG<sub>a</sub>GGGAAATTATTGGGCTAAAGAGCTCGTAGGCCGCTGTCACG  
TCGGATGTGAAAGGCCGGGCTTAACCCGGGCTGCATTG<sub>a</sub>ACGGGCTAGCTAGAGTGTGGTAGGGGAGATC  
GGAATTCCCTGGGTAGCGGTGAAATGCGCAGATATTCA<sub>a</sub>GGAGGAACACCGGTGGGAAGGCCGATCTCGGGCCA  
TTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTATACCC<sub>a</sub>GGTAGTCCACGCCGTAACGTTG  
GGA<sub>a</sub>ACTAGGTG<sub>a</sub>GGCGACATTCCACGTCGCTGCCGAGCTAACG<sub>a</sub>TTAAGTCCCGCTGGGGAGTACG  
GCCGCAAGGCTAAAGAATTGACGGGGCCGACAAGCAGCGGAGCATGTGGCTTAATTGACGCAA  
CGCGAAGAACCTACCAAGGCTGACATATA<sub>a</sub>CCGAAAGC<sub>a</sub>T<sub>a</sub>AGATGGGCC<sub>a</sub>GGCTTGTGGCGGTATACA

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[FIGURE 16 CONTINUED]

GGTGGTGCATGGCTGTCGTCANCTCGTGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTGTCT  
GTGTTGCCAGCATGCCCTTGGGGTGATGGGACTCACAGGAGACTGCCGgGGTCaCTCGGAGGA<sub>a</sub>GGTGGGGA  
CGAC<sub>a</sub>T<sub>c</sub>AGTCATCATGCCCTTATGTC<sub>t</sub>TGGGCTGCACACGTGCTACAATGGCGCTACAATGACCTGC<sub>a</sub>ATG  
CCGC<sub>c</sub>AGGC<sub>c</sub>GACCGAATCTC<sub>a</sub>ACAAGCCCCTCATTG<sub>t</sub>GCGGTCTG<sub>c</sub>aActcCGACCCAT<sub>a</sub>AgTCC  
GACT<sub>t</sub>GCTAgTACTCGCAC<sub>c</sub>TCAAC<sub>a</sub>T<sub>t</sub>GCTGCGCTG<sub>a</sub>ATAC<sub>c</sub>TCCCCGGGC<sub>t</sub>TGTACACACC<sub>c</sub>GCCC<sub>c</sub>GTCACGT  
CACGAAAGTCGGTAACACCCGAAGCCGGTGNCCAACCCCTGTGGGAGGGAGCTGTCGAA

EN39

SEQ ID NO:15

ccgccttcgccaccgggtttccctctgatatctgcgcatttaccgctacaccaggaattccnatctcccctacc  
acactctagctanccgtatcnaatgcaaaccggggtaaccccccgggcttcacaccnacntnacaancgc  
ctac<sub>a</sub>actcttacgccaataattccggacaacgcttgccctacttattaccgcggctgctggcacttatt  
tagccggcgcttctctgcaggtaccgtcactttcgcttccctgtgaaaaagg<sub>t</sub>tacaacccgaaggcng  
tcatccctcacgcggcntcgc<sub>t</sub>catcaggcttgc<sub>c</sub>ccat<sub>t</sub>gtcaatattccccactgctgc<sub>c</sub>ccgtagna  
ntctggccgtntctcantccagtgtggncgg<sub>t</sub>gc<sub>c</sub>cccttcaggccggctaccgc<sub>t</sub>gtcncc<sub>t</sub>ngt<sub>a</sub>acc  
attan<sub>t</sub>caccaacaagctgataggccgcggctatc<sub>t</sub>tcaccgcggagctttaaaccctgccc<sub>t</sub>atgaaaa  
cagangtnttatccgtattanaacccgtttccaggg

EN57

SEQ ID NO:17

GTCCTAACACATGCAAGTCGAACGATGAAGCCGTTGGGAGTTAGTGGCGAACGGGTGAGTAACACGTG  
GGCAATCTGCCCTTCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGATAACACTCTGCCCCATGGG  
ACGGGGTGTAAAGCTCCGGCGGTGAAGGATGAGCCCGCCCTATCAGCTTGTGGTGGTAATGGCCTACCAAG  
GCGACGACGGTAGCCGGCTGAGAGGGC<sub>a</sub>CCGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAG  
GCAGCAGTGGGAATATTGCACAATGGGCAAAGCCTGATGCAGCGACGCCGCGT<sub>t</sub>GAGGGATGACGGC<sub>t</sub>TCGGG  
TTGTAACACTTTTCAGCAGGGAAAGC<sub>a</sub>AGG<sub>t</sub>GTACCGTAC<sub>t</sub>GCAGAAGAAGC<sub>c</sub>GGCTAACTACGTGCCA  
GCAGCCCGGTAATACGTAGGGCGAAGC<sub>t</sub>GTCCGAATTATTGGGCTAAAGAGCTCGTAGGC<sub>c</sub>GGTTGTCA  
CGTCGGATGTGAAAGCCC<sub>c</sub>GGGCTTAACCCGGCTGCATTCGATACGGCTAGCTAGAGTGTGGTAGGGAGA  
TCGGAATTCC<sub>t</sub>GGGTAGCGGTGAAATGCGCAGATATNCAGGAGGAACACCGGTGGCGAAGGC<sub>c</sub>GGATCTCGGGC  
ATTACTGACGCTGAGGAGC<sub>a</sub>AGCGTGGGAGCGAACAGGATTAGATAACCTGGTAGTCCACGCC<sub>t</sub>AAACGTT  
GGGA<sub>c</sub>ACTAGGTGTTGGCGACATTCCACGTC<sub>t</sub>CGTGC<sub>c</sub>CGCAGCT<sub>a</sub>ACGC<sub>t</sub>TAAGTCCCCGCTGGGAGTA  
CGGCCGCAAGGCTAAA<sub>a</sub>CTCAAAGGAATTGACGGGGCCCGACAAGCAGCGGAGCATGTGGCTTAATTGACGC  
AACCG<sub>a</sub>AGAACCTTACCAAGGCTTGACATATAACCGGAAAGCATCAGAGATGGT<sub>t</sub>GGCC<sub>c</sub>CTTGTGGTCGGTATA  
CAGGTGGTGCATGGCTGTCGT<sub>c</sub>CTCGT<sub>t</sub>GAGATGTTGGGTTAAGTCCCGCAACGAGCGAACCC<sub>t</sub>GT  
CTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGA<sub>a</sub>CTG<sub>c</sub>C<sub>t</sub>GGGTC<sub>a</sub>ACTCGGAGGAAGGTGGG  
GACGACGTCAAGTCATCATGCCCTTATGTC<sub>t</sub>TGGGCTGCACACGTGCTACAATGGCCGGTACAATGAGCTGCGA  
TGCC<sub>c</sub>CGAgCGGGAgC<sub>a</sub>ATCTCAAAAGCCGGTCTC<sub>a</sub>gTT<sub>c</sub>GGGATTGGG<sub>t</sub>TCTG<sub>c</sub>AACTCGACCC<sub>c</sub>ATGAAAGTC  
GGAgTTGCTAgTAATC<sub>c</sub>AgATC<sub>a</sub>gCATTGCTG<sub>c</sub>GGTGAATACGTTCCGGGCTGTACACACC<sub>c</sub>GCCGTC<sub>a</sub>GT  
CACGAAAGTCGGTaACACCCGA<sub>a</sub>gCCGGTGGCC<sub>c</sub>ACCG<sub>c</sub>C<sub>t</sub>GTGGGAgGGA<sub>a</sub>CTTCCA

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FIGURE 17

SE1

SEQ ID NO:19

GAACGATGAAGCCGTTCGGGTGGATTAGTGGCGAACGGTGAGTAAAGTGGCAATTNCCTTCATTTGG  
CAAGCCCTGGAAACGGGTTAANACCGGATAACATTNTGCCGCATGGACGGGTTGAAGNTCCGGCGGT  
AAGGATGAGCCCGGGCNTATCAGCTTGGTGGGTAATGGCCTACCAAGGCAGCACGGGTAGCCGGCTGA  
GAGGGCGACC GGCCACACTGGGANTGAGACACGCCAGACTCCTACGGGAGGCAGCAGTGGGAATTATTCACA  
ATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGCCCTCGGGTTGTAAACCTNTTCAGCAGGG  
AGAAGCGAAAGTGA CGGTACCTGCAGAAGAAGGCCGGCTAAATANGTGC CAGCCCGGGTAATANGTAGGGC  
GCAAGCGTTGTC CGGAATTATTGGCGTAAAGAGCTTGTAGGCGGCTGT CANGTGGATGTGAAAGCCGGGGC  
TTAACCCC GGTTG CATTG A TACGGGCTAGT TAGAGTGTGGTAGGGAGATNGGAATTCTGGTGTAGGGT  
AAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCAGATCTCTGGC CATTACTGACGCTGAGGAGCGAAA  
GCGTGGGAGCNAACAGGATTAGATACCTGGTAGTCCACGCC TAAACGTTGGGAACTAGGTGTGGCGACATT  
CCACGTCGTGGTGC CGCAGCTAACG CATTAA GTTCCCCGCTGGGAGTACGGCGCAAGGCTAA ACTCAAAG  
GAATTGACGGGGGCCACAGCAGCGGAGCATGTGGCTAATTGACGCAACCGAACAA CCTTACCAAGGCT  
TGACATATACCGGAAAGC ATCANAGATGGT GCCCCCCTTGTGGT CGGTATACANGTGGTGCATGGCTGCGTCA  
CTCGTGTGAGATGTTGGGTTANGTCCCGCAACGAGCGCNACCCTGTTCTGTGCGNCNAGCATGCCCTTGC  
NGGTGATGGGACTCACANGAGACTGNCGGGG TCCACTCGGAGGAAGGTGGCGACNACGT CANNTCATCATGCC  
CCTTATGTCTGGGNCTGGCCACGTGCNA NTGGCC

SE2

SEQ ID NO:20

GCTGGGGCGTGTAAACACATGCAAGTCGAACGATGAAGCCGTTGGATTAGTGGCAACGGGTGAG  
TAACACGTGGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGAAACGGGTCTAATACCGGATAACACTCTGC  
CCGCATGGGACGGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCAGCCCTATCAGCTTGGTGGGGTAATG  
GCCTACCAAGGCAGCAGGGTAGCCGGCTGAGAGGGCACGGCCACACTGGGACTGAGACACGGCCAGACT  
CCTACGGGAGGCAGCAGTGGGAATATTGCACAAATGGCGAAAGCCTGATGCAGCGACGCCGTGAGGGATGAC  
GGCCTTCGGGTTGAAACCTTTCAGCAGGGAGAACGCAAAGTGAACGGTACCTGCAGAAGAACGCCGGCTAA  
CTACGTGCCAGCAGCCGGTAATACGTAGGGCGCAAGCGTTGTCGGAAATTATTGGCGTAAAGAGCTCGTAGG  
CGGCTTGTACCGTGGATGTGAAAGCCGGCTTAACCCGGGTCTGCATTGATACGGGCTAgCTAgAGTGTG  
GTAGGGGAGATCGGAATTCTGGTGTAGCGGTGAAATGCGCaGATATCAGGAGAACAcCGGTGGgAAAGcGGA  
TCTCTGGGcCAT TACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAGATACCCCTGGTAGTCCAAGC  
CGTAAACGTTGGGAACTANGTGTGGCGACATTCCACGTGTCGGTGCCGAGCTAACGCTTAAGTTCCCCGTC  
CTGGGGAGTACGGCCGNAGGCTAAAACCTCAAAGGAATTGACGGGGCCGCACAAGCAGCGGAGCATGTGGCTT  
ANTTCGACGCNACGCGAAGAACCTNNCAAGGCTGACATATAACCgAAAGCATCACAGATGGTCCCCCCTTGTG  
GTCGGTATAACAGggTGGTGCATGGCTGTcGtCaGCTCGTGTcgtGAGATGGTGGTTAagTCCGCAAAGAGCG  
CAACCGTGTCTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAcGAGACTGTCNGGGTCAACTCggA  
GGAAgGTGGgGACGACgTCAAGTtCATCATGCCCTTATGTCTTGGGCTGCACACNGCTACAATGGCCGGTACA  
ATGAGNNGGATGCCCGAGGGAGCGAATCTAAAAAGCCGGTCTCAGTTGGATTGGGGTCTGCAACTGACC  
CCATGAAGTGGAGTTGCTAGTAATCGCAGATCAGCATTGCTGCCGTGAATACGTNCCGGCCTNGTACACACC  
ACCCGTACGTACGAAAGTCGGTAACACCTAACGCCGTCGNCACCCCTNTGGGAGG

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**FIGURE 18**

**PM36**

**SEQ ID NO:21**

CCAGANATCGCCTCGCCACCGGTGTTCCCTGATATCTGCGCATTACCGCTACACCAGGAATTCCGATCT  
CCCCTACCACACTCTAGCTAGCCCCTACGAAATGCAGACCCGGGGTTAAGCCCCGGGCTTCACATCCGACGTGA  
CAAGCCGCCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTACCGCGGCTGCTGG  
CACGTACTTAGCCGGCCTTCTCTGCAAGGTACCGTCACTTCGCTTCCCTGCTGAAAGAGGTTACAACCC  
GAAGGNCGTCATCCCTACGCCGGCTGCATCAGGCTTCGCCATTGTGCAATATTCCCCACTGCTGCCTC  
CCGTAGGGAGTCTGGGNCGTGTTCAATNCCAGTGGTGGGCCGGTCGCCCTCAGGNCGGCTACCGTCGTCGCC  
GGTAGGCATTACACAAAGCTGATAGGCGGGGTCATCCTCAACGCCGGAGCTCAAACCGTCCATGCGGG  
ACAAGTGATCCGGTATTAACCC

**PM40**

**SEQ ID NO:22**

TCA GTNATGGCC CAGAANGATCCGNCTCGCCACCGGTGTTCCCTCCTGATATCTGCGCATTACCGCTACACCA  
GGAATTCCGATCTCCCTACCACACTCTA ACTAGCCCCTACGAGCTTCACTGCAATGCAGACCCGGGGTTAAGCCCCGGGCTTTC  
ACATCCGACGTGACAAGCCGCCTACGAGCTCTTNA CGCC AATAATTCCGGACAACGCTTGCGCCCTACGTATT  
CCGC GGCTGCTGGCACGTAGTTAGCCGGCCTTCTCTGCAAGGTACCGTNACTTCGCTTCTTCCCTGCTGAAAG  
AGGTTTACAACCCGAAGGCCGTCNTCCCTACGCCGGCTCGTGCATCAGGCTTCGCCCATNGTCANTATTCC  
CCACTGNTGNCTCCCTANGAGTCTGGCCGTGTCAGTCCCAGTGTGGCCGGTCGNCCCTCAGGCCGGCTAC  
CGT CGTCCGCTTGGTAGGNCAATTACCCACCAACAAGCTGATAN TCGN GGGCTCATCCTTCACCGNC GAGN TT  
AACCCCGTNCATGCGGGACAGAGTGT TATCCGGTATTANACCGTATNCAGGGCTGTCCCAGTGAAGGGNAG  
ATNGCCACGTGTTATCACC GTTCGNC ACTAATNATCANC GAANC GGCTCATCGTCACTTGCA TGATGTGTTA

**PM41**

**SEQ ID NO:23**

CTCAGCGTCAGTCATGGCCAAGAGATCCGCCTCGCCACCGGTGTTCCCTCCTGATATCTGCGCATTACCGCT  
ACACCAAGGAATTCCGATCTCCCTACCACACTCTAGCTAGCCCCTATCGAATGCAGACCCGGGGTTAAGCCCCGG  
GCTTTACATCCGACGTGACAAGCCGCCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTAC  
GTATTACCGCGCTGCTGGCACGTAGTTAGCCGGCCTTCTCTGCAAGGTACCGTCACTTCGCTTCTTCCCTGC  
TGAAAGAGGTTACAACCCGAAGGCCGTCATCCCTACGCCGGCTCGTGCATCAGGCTTCGCCCATTTGCA  
TATTCCCACTGCTGCCTCCCGTAGGAGTCTGGCCGTGTCAGTCCCAGTGTGGCCGGTCGCCCTCAGGCC  
GGCTACCCGTGTCGCCCTGGTAGGCCATTACCCACCAACAAGCTGATAGGCCGGGCTCATCCTTCACCGNC  
GAGCTTTAACCGTCCATGCCGGACAGAGTGT TATCCGGTATTAAACCGTTCAAGGGCTGTCCCAGTGAAG  
GGCAGATTGCCACGTGTTATCANC CGTTCGNC ACTAATCACANC GAANC GGTTCATCGTCACTTGCA  
TAA

**PM171**

**SEQ ID NO:25**

CCCTCAGGGTCAGTAATGGGCCAGAGATCCGCCTCGCCACCGGTGTTCCCTCCTGAAATATCTGCGCATTAC  
GCTACACCAAGGAATTCCGATCTCCCTACCACACTCTAGCTAGCCCCTATCGAATGCAGACCCGGGGTTAAGCCC  
CGGGCTTCACATCCGACGTGACAAGCCGCCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCC  
TACGTATTACCGCGCTGCTGGCACGTAGTTAGCCGGCCTTCTCTGCAAGGTACCGTCACTTCGCTTCTTCC  
TGCTGAAAGAGGTTACAACCCGAAGGCCGTCATCCCTACGCCGGCTCGTGCATCAGGCTTCGCCCATTTG  
CAATATTCCCACTGCTGCCCTCCGTAGGAGTCTGGCCGTGTCAGTCCCAGTGTGGCCGGTCGCCCTCAG  
GCCGGCTANC CGTGCCTGGTAGGCATTANCCCANAACAAGCTGATAGGCCGGGCTCATNCTCAAC  
GCCGGAGTTCAANCCGTCCATGCCGGACAGAGTGT TATNCGGTATAAACCGTTCAAGGGCTTGTCCAGA  
GTGAAGGGCAGATTGCCACGTGTTATCACCGTTCGGCACTAATCACACGAAGCGGNTTATCGTCACTTGCA  
TGTGTTAACAAAGCCGCCAGCGTTCGTC

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[FIGURE 18 CONTINUED]

PM185

SEQ ID NO:26

TCA GT AAT GGGCC CAGAGA TCCGC CTTGCC ACCGGT GTT CCTC CTGG AT ATCT GCG CATT CACCGT ACACCA G  
GAAT TCCG ATCT CCCCT ACCAAC TCTAG CTA GCGT ATCG AAT GCA GACC CGGG TTAA GCCC CGGG TTTC A  
CATCCGACGTGACAAGCCGCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTAC  
CGCGGCTGCTGGCACGTAGTTAGCCGGCTTCTCTGCAGGTACCGTCACTTTCGCTTCTCCCTGCTGAAAGA  
GGTTTACAACCGAAGGCCGT CATCCCTCACGCCGCTCGCTGCATCAGGCTTCCGGCCATTGTGCAATATTCCC  
CACTGCTGCCTCCCGTAGGAGTCTGGCCGTCTCAGTCCCAAGTGTAGGCCGGCTCAGGCCCTCTCAGGCCGCTACCC  
CGT CGT CGCCTTGGTAGGCCATTACCCACCAACAAGCTGATAGGCCGGCTCAGGCCCTCTCAGGCCGAGCTT  
TAACCCCGTCCCAGTGCAGGACAGAGTGTATCCGGTATTAGAACCCGTTCCAGGGCTGTCCAGAGTGAAGGG  
CAGATTGCCACGTGTTACTCANCGTTCGNCACTAATCANAACGAAGCCGTTCATCGTTCGACTTGCACTGTG  
TAAGCACGCCNCAGCGTCTGAGCCAGGATC

PM208

SEQ ID NO:27

TCA GT AAT CNGCC CAGAGA TCCGC CTTGCC ACCGGT GTT CCTC CTGG AT ATCT GCG CATT CACCGT ACACCA G  
GAAT TCCG ATCT CCCCT ACCGA ACTCTAGCCTGCCGTATCGACTGCA GACC CGGG TTAA GCCC CGGG TTTC A  
CAACCGACGTGACAAGCCGCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTAC  
CGCGGCTGCTGGCACGTAGTTAGCCGGCTTCTCTGCAGGTACCGTCACTTTCGCTTCTCCCTGCTGAAAGA  
GGTTTACAACCGAAGGCCGT CATCCCTCACGCCGCTCGCTGCATCAGGCTTCCGGCCATTGTGCAATATTCCC  
CACTGGTGNCCTCCCGTANGAGTCTGGCCGTGTCANTCCAGTGTGGCCGGTGCCTCTCAGGCCGCTACCGT  
CGT CGCTGGTAGGCCATTACCCACCAACAAGCTGATANGNCNGGGCTCAGGCCGAGCTTCA  
ANCCCGTCCCATGCCGAGACAGAGTGTATCCGGTATTAAACCCGNTCCAGGGCTGTCCATAGTGAAGGGCAGA  
TTGCCAAGTGTATCANCGTTCGNCACTAATCATCANAACGAAGCCGTTCATCGTTCGACTGCATGTGTT

PM228

SEQ ID NO:28

TCA GT AAT GGGCC AGA NA TCCGN CTTGCC ACCGGT GTT CCTC CTGG AT ATCT GCG CATT CACCGT ACACCA G  
AATTCCGATCTCCCTACCACACTCTAACACTAGCCCGTATCGAATGCA GACC CGGG TTAA GCCC CGGG TTTC A  
ATCCGACGTGACAAGCCGCTACGAGCTTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTAC  
GCGGCTGCTGGCACGTAGTTAGCCGGCTTCTCTGCAGGTACCGTCACTTTCGCTTCTCCCTGCTGAAAGA  
GTTTACAACCGAAGGCCGT CATCCCTCACGCCGCTCGCTGCATCAGGCTTCCGGCCATTGTGCAATATTCCC  
ACTGCTGCCTCCCGTAGAGTCTGGCCGTGTCAGTCCAGTGTGGCCGGTGCCTCTCAGGCCGCTACCG  
TCGT CGCCTTGGTAGGCCATTACCCACCAACAAGCTGATANGNCNGGGCTCAGGCCGAGCTTCA  
ANCCCGTCCCATGCCGAGACAGAGTGTATCCGGTATTAAACCCGNTCCAGGGCTGTCCATAGTGAAGGGCAGA  
TTGCCAAGTGTATCANCGTTCGNCACTAATCATCANAACGAAGCCGTTCATCGTTCGACTGCATGTGTT

PM252

SEQ ID NO:29

TCCCTCAGNATCAGTAATGGCC CAGAGA TCCGC CTTGCC ACCGGT GTT CCTC CTGG AT ATCT GCG CATT CACCGC  
TACACCAAGGAATTCCGATCTCCCTACCACACTCTANCTAGCCCGTATCGAATGCA GACC CGGG TTAA GCCC CG  
GGCTTTCACATCCGANGTGACAAGCCGCTACGAGCTTTACGCCAATAATTCCGGACAANGCTTGCGCCCTA  
CGT ATTACCGCGGNTGCTGGCACGTAGTTAGCCGGCTTCTCTGCAGGTACCGTCACTTTCGCTTCTCCCTG  
CTGAAAGAGGTTTACAACCCGAAGGCCGT CATCCCTCACGCCGCTCGCTGCATCAGGCTTCCGGCCATTGTGCA  
ATATTCCCGACTGCTGCCTCCCGTAGGAGTCTGGCCGTGTCATCCAGTGTGGCCGGTGCCTCTCAGNC  
CGGCTACCGTCGCTGGTAGGCCATTACCCACCAACAAGCTGATAGGCCGGGCTCATTCTCACCGCC  
GGAAGCTTAANCCCGTCCATGCCGAGANAGTGNATCCNGTATTAAACCCNGTTCAGGGCTGTCCAGAGTG  
AAGGGNGATTGCCCNAGTGTATCNCCCGTCCGCACTAATCNACAAACGAAGCCGNTTCNTCGACTTG  
C

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[FIGURE 18 CONTINUED]

PM342

SEQ ID NO:30

TAATGGCCCAGAANATCCGCCTTCGCCACCGGTGTTCTCTGAATATCTGCGCATTTCACCGCTACACCAAGGAA  
TTCCGATCTCCCTACCAACTCTAGCTAGCCCGTATCGAATGCAGACCCGGGTTAACGCCCCGGGCTTCACAT  
CCGACGTGACAAGCCGCCTACGAGCTCTTACGCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTACCGC  
GGCTGCTGGCACGTAGTTAGCCGGCGCTTCTCTGAGGTACCGTCACCTTCGCTTCTCCCTGCTGAAGAGGTT  
TTACAACCGAAGGCCGTATCCCTCACGCCGCTGCATCAGGCTTCGCCATTGTCAATATCCCCAC  
TGCTGCCTCCCGTAGGAGTCTGGCCGTGTCTCAGTCCCAGTGTGGCGGTGCCCCCTCTCAGGCCGGNTANCGTC  
GTCGCCTGGTANGCCATTANCCCACCAACAAGCTGATANGCCGGGCTCATCCTTCANGCCGGAGCTTTAA  
CCCCGTCCATGCCGGACAGAGTGTATTAGATCCGTNTCCAGGGCTGTNCATAGTGAAGGGCANA  
TTGCCACGTGTTACTCANCCGTTCGC

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**FIGURE 19**

**EN4**

GGCGGGGTGCTTAACACATGCAAGTCGAACGATGAACCACTCGGTGGGGATTAGTGGCGAACGGGTGAGTAACA  
CGTGGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGGAAACGGGGTCTtAATACCGGATAACACTCCCCTC  
CTGAGTGGGGTTAAAAGCTCCGGCGGTGAAGGATGAGCCCGGGCTATCAGCTTGGTGAAGGTAATGGCTC  
ACCAAGGCAGCAGCGGCTGAGAGGGCGACCGGCCACACTGGACTGAGACACGGCCAGACTCCTA  
CGCGAGGGCAGCAGTGGGAATATTGCAACAATGGCGAAAGCTGATGCAAGCAGCCCGTGAAGGGATGACGGCC  
TTCGGGTTGTAAACCTCTTCAGCAGGGAAAGAAGCGAAAGTGCAGGTACCTGCAGAAGAACGCCGGCTAACTAC  
GTGCCAGCAGCCGGTAATACGTAGGGCGCAAGCGTTGTCCGGAATTATTGGCGTAAAGAGCTCGTAGGCGC  
TTGTCACGTCGGGTGTGAAAGCCGGGCTTAACCCCGGGCTGCAATTGATACGGCTAGCTAGAGTGTGGTAG  
GGGAGAGATCGGAATTCTGGTGTAGCGGTGAAATGCGCAGATATTCAAGGAGGAACACCGGTGGCAAGGGGGATCT  
CTGGGCCATTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAGATAACCTGGTAGTCCACGCCGT  
AAACGGTGGGAACTAGGTTGTGGCGACATTCCACGTCGTGGTGCAGCTAACGCAATTAGTCCCCGCCCTG  
GGGAGTACGGCCGCAAGGCTAAAACCAAAGGAATTGACGGGGGCCGCAAGCAGCGGAGCATGTGGCTTAAT  
TCGACGCAACCGCAAGAACCTACCAAGGCTGACATACACCGGAAAGCATCAGAGATGGTGCCCCCTGTGGT  
CGGTGTACAGGTGGTCATGGCTGTCGTCACTCGTGTGAGATGTTGGTTAACGAGCAGGCGAAC  
CCTTGTCTGTGTTGCAAGCAGTCAGCCCTCGGGGTGATGGGACTCACAGGAGACGCCGGGCTAACACTGGAGGAA  
GGTGGGGAcAGCTCAAGTCATCATGCCCTATGTCCTGGCTGCACACGTCTAACATGGCAGGTACAATGAG  
CTGCGATACCGTGAGGTGGAGCGAATCTCAAAAGCCTGTCAGTTCGGATTGGGCTGCAACTGACCCCCcaT  
GAAGTCGGAGTTGCTAGTAATCGCAGATCAGCATTGCTGCGGTGAATACTGTTCCCCGGCTTGTACACACCGGCC  
GTCACGTCACGAAAGTCGGTAACACCGAAGCGGTGGCCCAACCCCTGTGGGAGGGAGCTGTCGAAGGTGGGA  
CTGGCGATTGGG

**EN10**

GAGTTTGATCNNGCTCAGACGAACGCTGGCGGTGTTAACACAANCCAAGTCGAANGNTGAACCACCTCGTTG  
GGATTAGTGCAGCGAACGGTNTAACACGNTGGCAATGTGCCCTCACTNTGGACAAGNCCTGGAAACCGGGTTCTA  
ATACCGGATACCAACTACCGCAGGCATCTGTTGTTGAAAGCTCCGGCGTTGAAGGATGAGCCCGGGCTAT  
CAGCTTGTGGTGGAGGTAATGGCTACCCAAGGGCAGCAGCGATAGCCGGCTGAGAGGGCGACCGGCCACACTG  
GGACTGAGACACGGCCAGACTCCTACGGAGGCAGCAGTGGGAATATTGCAACATGGCGAAAGCCTGATGCAG  
CGACGCCCGTGAAGGGATGACGGCTTCGGGTTGTAACCTCTTCAGCAGGGAAAGCAGAAAGTGAAGGTACCGTAC  
TGCAGAAGAAGCGCCGCTAACACTACGTGCCAGCAGCCCGGTAATACGTAGGGCGAACGCTGTCCCGAATTAT  
TGGCGTAAAGAGCTCGTAGGGCTTGTACGTCGGGTGTAAGGCGGGCTTAACCCGGGTCTGCATTG  
ATACGGGCTAGCTAGAGTGTGGTAGGGGAGATCGGAATTCTGGTGTACCCGGTGAATGCGCAGATATCAGGAG  
GAACACCGGTGGCGAAGGCAGATCTCTGGCCATTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGAT  
TAGATACCCCTGGTAGTCCACGCCGTAACGGTGGGAACTAGGTGTTGGCGACATTCCACGTCGTGGTGCAGCAG  
CTAACGCATTAAGTCCCCGCTGGGAGTACGGCGCAAGGCTAAACAGGAATTGACGGGGGCCGCAAC  
AAGCAGCGGAGCATGTGGCTTAATTGACGCAACCGAAGAACCTACCAAGGCTGACATACGCCGAAAGCAT  
CAGAGATGGTGGCCCTTGTGGTGGTACAGGTGGTGCATGGCTGTCGTGAGCTGTCGTGAGATGTTGG  
GTTAAGTCCCGCAACGAGCGAACCCCTGTCCTGTGTTGcCAGCATGCCCTCGGGGTGATGGGACTCACAGGA  
GACCGCGGGGTCAACTCGGAGGAAGGTGGNGACGACGTCAGTCATCATGCCCTTATGTCCTGGGCTGACA  
CGTGCACNATGggCaGGTACAATGAGCTGCGATACCGTGAGGTGGAGCGCATCTnnnnnAGCctGTCTCAGTT  
GgATTGGGGTCTGcaACTCGACCCCCaTGAAGTCGgAGTTGCTAGATAATCgCAGATCAGCATTGCTGCGGtGGAAT  
ACGTTCCCGGCCTGTACACACCGCCCGTACGTACGAAAGTCGGTAACACCGAAGCGGTGGCCCAACCC  
TTGTGGGAGGGAGCTGTCGAANGTGG

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[FIGURE 19 CONTINUED]

EN22

TCCCTAGCGTCAGTAATGGCCCAAAACCGCCTTCGCCACCGGTGTTCCCTGATATCTGCGCATTCAACCGCT  
ACACCAGGAATTCCNATCTCCCCTACCAACACTCTAGCTAGCCGTATCNAATGCAAACCCGGGTTAANCCCCGG  
GCTTTCACATCCNACNTGACAAGCCGCTACAANCTCTTAGCCCAATAATTCCGGACAACNCTTGCGCCCTAC  
TTATTACCGCGGCTGCTGGCACTTATTAGCCGGCCTTCTTCAGGTAACCGTCACTTCGCTTCTCCCTGC  
TGAAAAAGGTTTACAACCCNAAGGCCGTACATCCCTCACGCCNCNTGCATCAGGCTTCNCCATTGTGCAA  
TATTCCCCACTGCTGCCCTCCGTAGGATTCTGGCCGTNTCTCANTCCANTGTGGCCGGTCGCCCTCAGGCC  
GGCTACCCGTGTCNCCTTGGTAGGCCATTACCCNCCAACAANCTGATAGGCCGGCCTNTCCTCACCGCC  
GGAGCTTCAACCCGTCCTAGCGGGANAABNTGTTNTCCGGTATTAAAACCCGTTCCAGGGNTTGTCACAAAAA  
TTGAAGGGNANATTGCCACTTTNNTCACCGTTCCCAACTATCCACCAACCGAA

EN30

TGGNGNGNTGCTTAACACATGCAAGTCGAACGATGAANCCTTCGGGGTGGATTAGTGGCAACGGGTGACTAAC  
ACGTGGCAATCTGCCCTTCACTCTGGACAAGCCCTGGAAACGGGTCTAATACCGATAACACTCTGCCCCG  
ATGGGACGGGTTAAAAGCTCCGGCGGTAGAGGATGAGCCCGGGCTATCAGCTTGTGGGTGATGGCCT  
ACCAAGGCAGCAGCGGCTAGCCGGCTGAGAGGGGACCCGGGACACTGGACTGAGACACGGGCGAGACTCCTA  
CGGGAGGCAGCAGTGGGAATATTGACAAATGGCGAAAGCCTGATGCGACGCCGCGTGGGAGTACGGCC  
TTGGGTTGTAAACCTTTCAAGCAGGGAAAGAAGCGAAAGTACGGTACCTGCAGAAGAAGGCCGCTAACTAC  
GTGCCAGCAGCGCGGTAAACGTAAGGGCGCAAGCGTTGTCCGGATTATTGGCGTAAAGAGCTCGTANGCGGC  
TTGTCACGTCGGATGTGAAAGCCGGGCTTAACCCGGGCTGCATTGACGGCTAACTAAAATGTGGTAGG  
GGAGATCGGAATTCTGGTGTANCGGTAAATGCGCAGATATCAAGAGGAACANCGGTGGCAANGCGGATCTCT  
GGGCCATTACTGACGCTGAGGAGCGAAAGCGTGGGAGCGAACAGGATTAGATACCTGGTAGTCCACGCCGTA  
ACGTTGGAAACTAGGTGTTGGCAGATTCCACGTCGTCGGCAGCTAACGCAATTAGTCCCGCTGGGG  
AGTACGCCGCAAGCTAAACTCAAAGGAATTGACGGGGGGCCACAGCAGCGGAGCATGTGGCTTAATTG  
ACGCAACCGGAAGAACCTTACCAAGGCTTGACATATAACCGGAAAGCATCAGAGATGGTCCCCCTTGTTGG  
TATACAGGTGGTGCATGGCTGCGTCAGCTCGTGTGAGATGGTGGGTTAAGTCCCGCAACGAGCGAACCC  
TGGTCTGTGTTGCCAGCATGCCCTCGGGGTGATGGGACTCACAGGAGACTGCCGGGGTCAACTCGGAGGAAGG  
TGGGGACGACGTCACTCATGCCCTATGCTTGGGCTGCACAGTGTACAAATGCCGGTACAATGAGCT  
GCGATGCCCGAGGGGGAGCGAACATCTAAAGCCGGTCTCAGTGGGATTGGGCTGCAACTCGACCCCATGA  
AGTCGgAGTTGCTAgTAATCgCAGATCAGCATTGCTGCCGTGAATAACGTTNCCGGGCTtGTACAcACCGCC  
CACGTCACgAAAGTCGGTAACACCGAAGNCCGGTGGTCCAACCCCTGTGGGAGGGAGACTGTCGAAGGTGGGA  
CTGGCGATTGG

EN43

CTCAGCGTCACTATGGCCCAAAACCGCCTTCGCCACCGGTGTTCCCTGATATCTGCGCATTCAACCGCTA  
CACCAAGGAATTCCNATCTCCCCTACCGAACTCTANCCTGCCGTATCAACCGCAGGCTGGGTTAAGCCCCAA  
TTTTCACGGTCAACGCNACAAGCCGCTACAAGCTCTTAGCCCAATAATCCGGACAACGCTCGCACCCCTAC  
TTCTACCGCGGCTGCTGGCACTTATTGGCCGGTGTCTCTGCAGGTACCGTCACTCTCGCTTGCCCTGC  
TNAAAAAGGTTTACAACCGAAGGCCGTACGCCACGCCGCTGAGGCTGGGCTGCAGGCTCCGCCATTGTGCAA  
TATTCCCCACTGCTGCCCTCCGTAGGATTCTGGGCGTNTCTCANTCCAGTGTGGCCGGTCGCCCTCAGGCC  
GGCTACCCGTGTCGCCCTGGTAGGCCATCACCCACCAACAAGCTGATAGGCCGNAAGCCCATCCAAAGCCGA  
AAAACTTTCAACACCAGCCATGCCGAAATTCCTATTGGTATTAGCCCCGTTCCNAAGGTNTCCCAA  
GCTTGGGGCAGGTTGCTCACTTTACTCACCGTTCCGCTCAATTACCCNAAGGGNTTCCCTCAACTTGC  
AT

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[FIGURE 19 CONTINUED]

EN47

CGCTGGCGSGTGTAAACACATGCAAGTCGAGCGGAAAGGCCCTCGGGgTACTCGAGCggcGAACGGGTGAGT  
AACACGTGAGTAATCTGCCCAAGGCTCTGGGATAGCCACCggAAACGGTATTAAATACCGGATACGACAACCGAT  
TGCATGATCTGGTTGTGAAAGTTTTCGGCCTGGGATGTGCTCGCggcTATCAGCTTGTTGAGGTAATGG  
CTCACCAAGGCTCGACGGTAGCCGGCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCAGACTC  
CTACGGGAGGCAGCAGTGGGAATATTGACAATGGGCGGAAGCCTGATCCAGCAACGCCGCGTGGGAGTACG  
GCCTTGGGTTGTAACCTCTTCAGCACAGACGAAGCGAAGTGAAGGTTGAGCAGAAGAAGGACGGCCAAC  
TACGTGCCAGCAGCCGGTAATACGTAGGGTCCGAGCAGTGTCCGGAATTATTGGGCGTAAAGGGCTCGTAGGC  
GGTCTGTCGCGTGGGAGTGAACAGGTGCTAACACCTGGCCTGTTGATACGGGAGACTAGAGGTACT  
CAGGGGAGAATGGAATTCTGGTGTAGCGGTGAATGCGCAGATATTCAAGGAGGAACACCGGTGGCGAAGGCGGT  
TCTCTGGGAGTATCTGACGCTTGAAAGAGCAAAGTGTGGGAGCGAACAGGATTAGATANTNTGGTAGTCCACA  
CCGTAACGTTGGGCGTAGGTTGGGACACATTCCACGTGTTCCGTGCCGAGCTAACGCATTAAGGCCCGC  
CTGGGGAGTACGGCCCAAGGCTAAAACCAAAGAATTGACGGGGGCCGACAAGCGGGAGCATGCGGATT  
AATTGATGCAACCGCAAGAACCTTACCTGGGTTGACATAACCGGAAAGCGTAGAGATAACGGCCCTTTAG  
TCGGTGACAGGTGGCATGGCTGCTCAGCTCGTGTGAGATGTTGGGTTAAGTCCCACAGCGCAA  
CCCTCGTCTATGTGCCAGCAATTGGTTGGGACTCATAGGAGACTGCCGGGTCAACTGGAGGAAGGTGGG  
GATGACGTCAAGTCATCATGCCCTTATGTCCAGGGCTCACCGATGCTACAATGGCGGTACAAAGGCTGCGA  
TCCCCTGAGGGTGAGCGAATCCAAAAGCCGGTCTAGTCGGATTGGGCTGCAACTCGACCCATGAAGTC  
GGAGTCGCTAGTAATCGCAGATCAGCAACGCTGGGTGAATACGTTCCGGGCTTGTACACACCCTGACG  
TCACGAAAGTCGGCAACACCGAAGCCAGTGGCCCAACCTTGTGGGGGAGCTGTCGAAGGTGGGCTGGCGAT  
TG

EN59

GGGNATTAGTGGGAACGGGTGAGTAAAANGTGGCANTTCCCTGNATTGGACANCCCNNGAAANGGNT  
NTAAAACNGGATANTGACCACCTGGCATCCAAGTTNGAAACTTCCGGCGGTGAGGATGAGCCNCGGCNTA  
TNAGCTTGGNGAGTAATGGNTCACCAAGGGANGACGGTAGCCGGCTGAGAGGGACCNCCACANTGGG  
ANTGAGANACGGCCAGANTCTACGGGAGGCAGCAGTGGGAATATTGACAATGGCGAAAGCCTGATGCGAGG  
ANNCCGCGTGGGAGGANGACGGCTTNGGGTTGTAACNTTTNAGCAGGGAAAGCAGGAAAGTGA  
CAGAAGAACGCCGGCTAAATAAGTGCCAGCAGCGCGTAATAAGTAGGGNGCGAGCGTTGTCAGGGAAATTATG  
GGNGTAAAGAGTTGTAGCGGNTTGTNAAGTNGGTTGAAAGCCGGGNTTAACCCGGGTTGCAGTTGAT  
ACGGGCAGGNTAGAGTTGGTAGGGGAGATNGGAATTCTGGTGTAGGGTGAATGCGCAGATATCAGGAGGAA  
CACCGGTGGCGAAGGGGATCTCTGGGCCATTACTGACGCTGAGGAGCGAAAGCGTGGGGAGCGAACAGGATTAG  
ATACCCCTGGTAGTCCACGCCGTAAACGGTGGGAACTAGGTGTGGCGACATTCCACGTCGTCGGTGGCAGCTA  
ACGCATTAAGTCCCCGCTGGGAGTACGGCGCAAGGCTAAACTCAAAGGAATTGACGGGGCCCGACAAG  
CAGCGGAGCATGTGGCTTAATTGACGCAACCGCAAGAACCTTACCAAGGTTGACATACACCGGAAAGCATCAG  
AGATGGTGGCCCTGTGGTGGCGGTACAGGTGGCATGGCTGTCGTCAGCTCGTGTGAGATGTTGGGTT  
AAGTCCCAGACGAGCGCAACCCCTGGTGTGGTGTGAGGAGGAGCTACAGGAGAC  
CGCCGGGGTCAACTCGGAGGAAGGTGGGAGCGACGTCAAGTCATCATGCCCTTGGGGTGTGGGACTCACAGGAGAC  
CTACAATGGCGGTACAAAGAGCTGCGATACCGTGGAGGTGGAGCGAATCTCAAAAGCCGTCTCAGTTGGATT  
GGGGTCTGCAACTCGANCCATGAANTGGAGTTGCTAATTATCGCAAAATCAAGCATTGCTGGCGGTGAATAC  
GTTCCC

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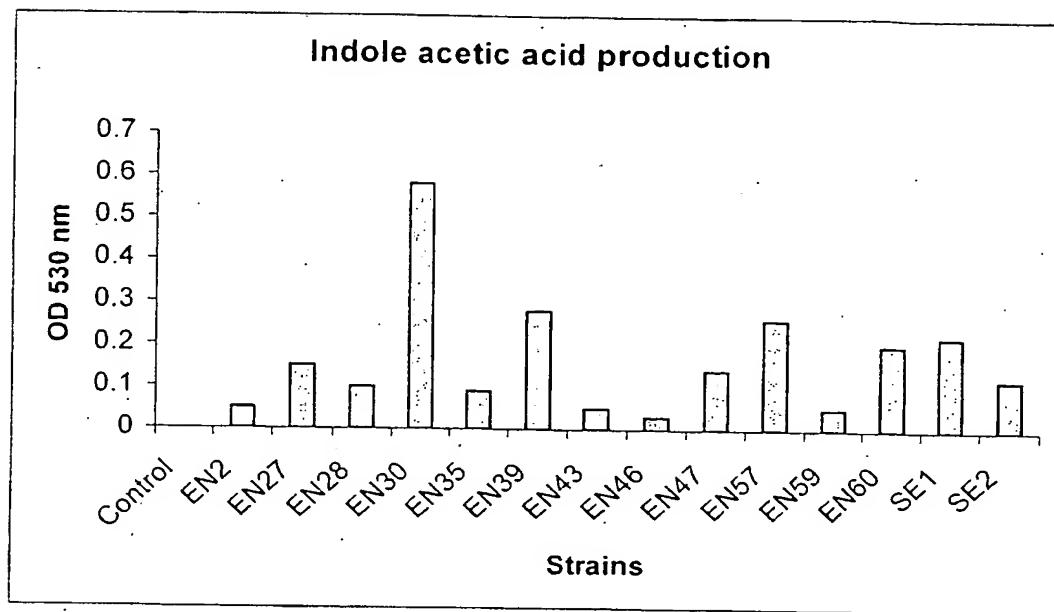
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**Figure 20**

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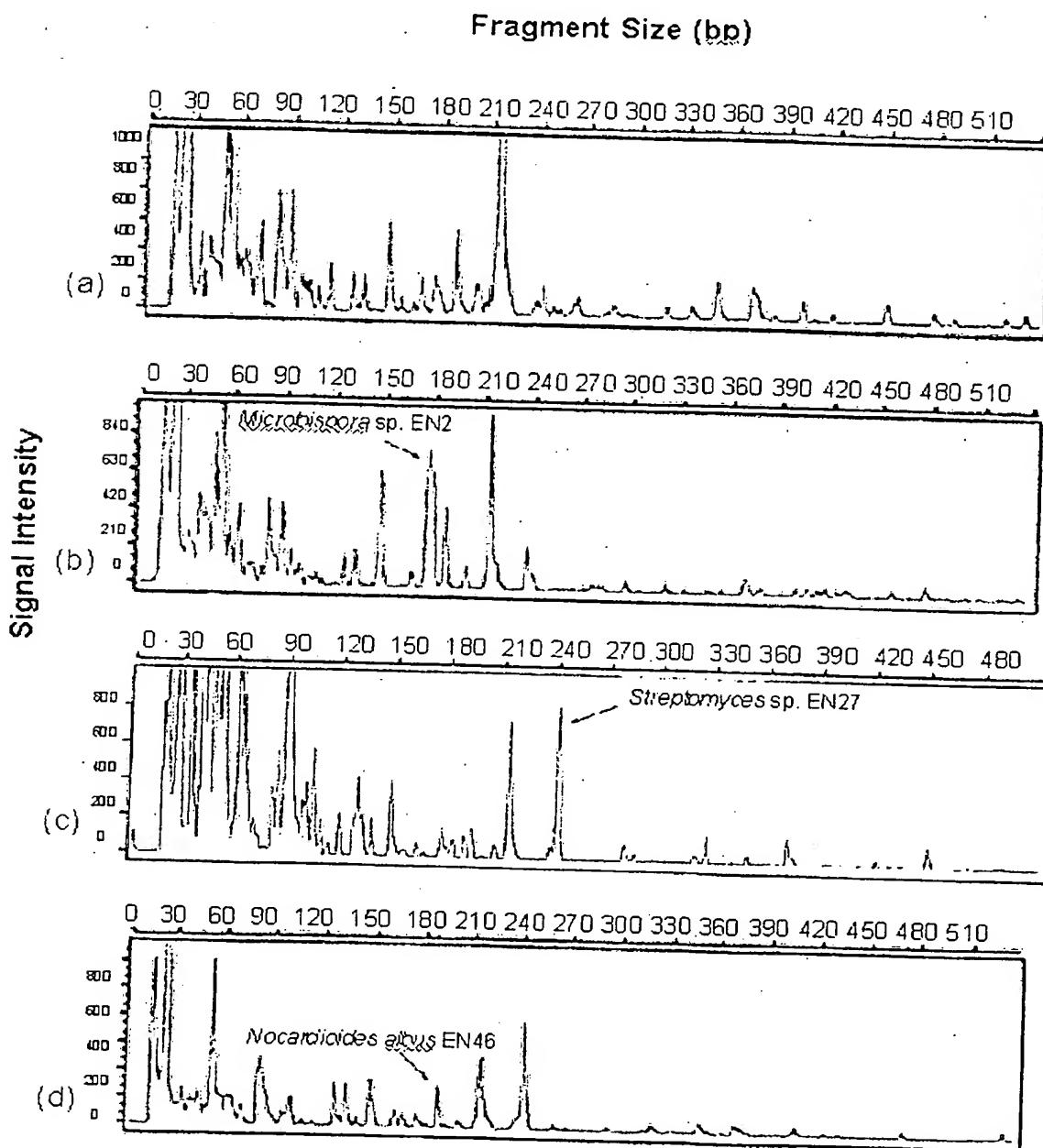
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Figure 21



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